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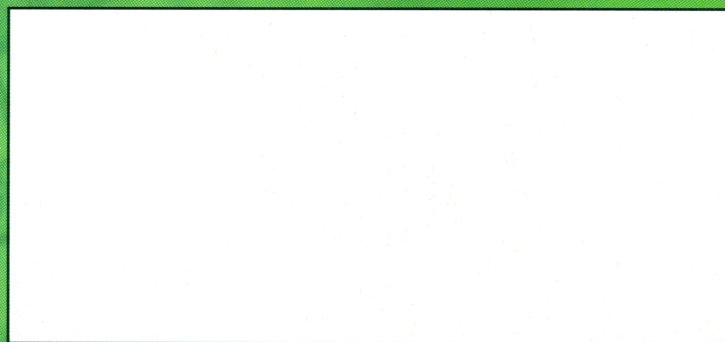
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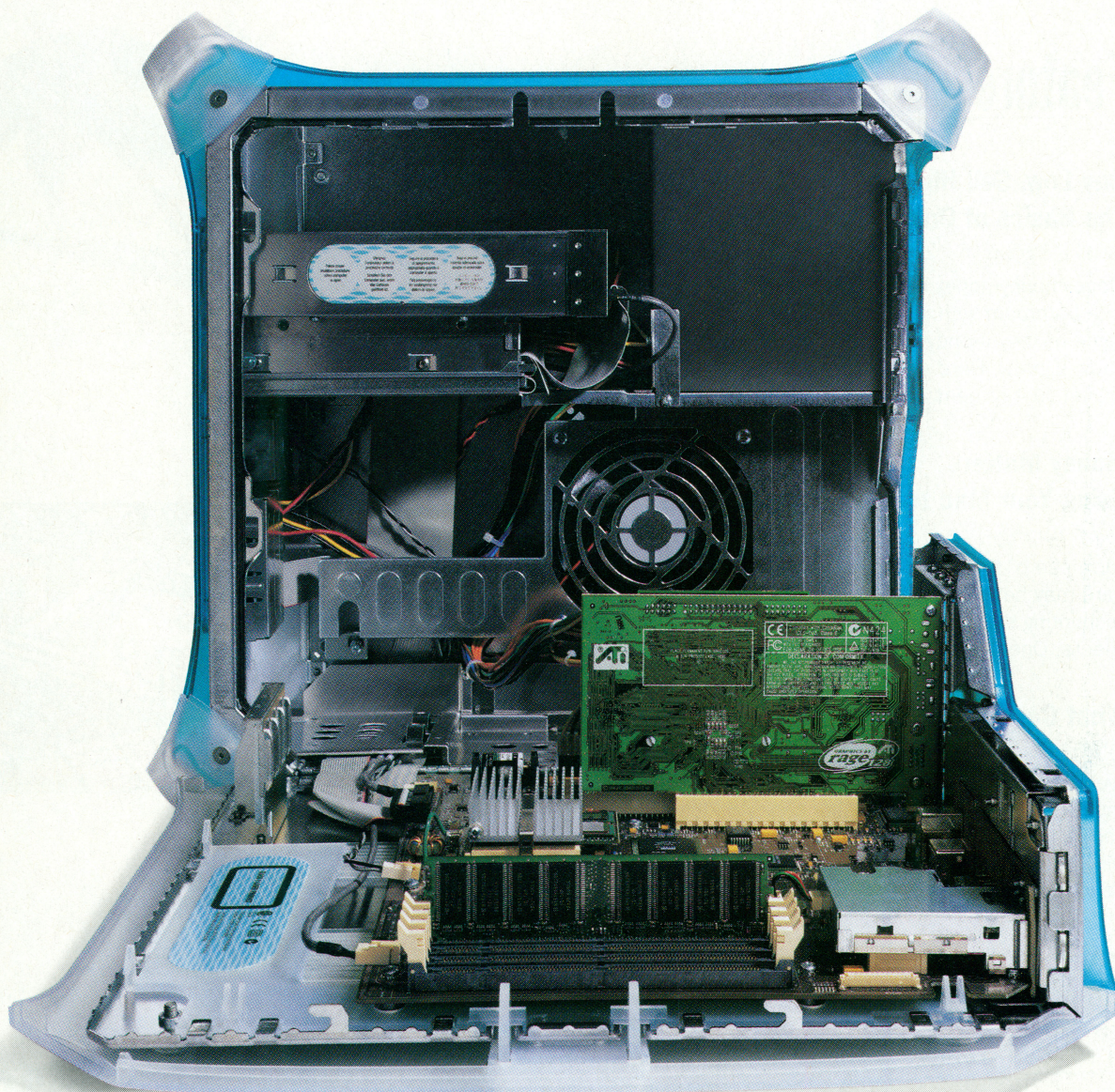



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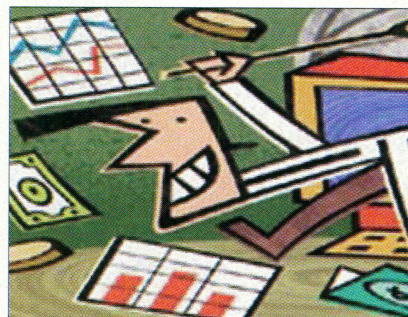
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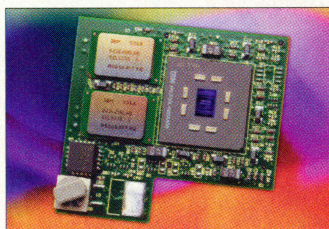
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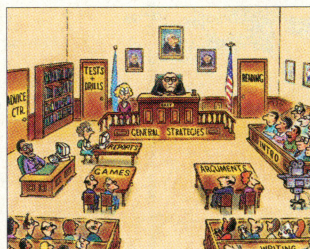
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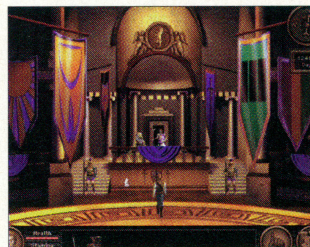
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from the chief [Editorial]

Oh, Bother

Seconds after the 1999 Macworld Expo keynote address ended, people were asking me what I thought of the show. My reaction was, and is, that it was fine, okay, not bad, whatever. My socks were still attached.

Of course, the people asking that question had their own opinions, and most of them thought the Steve Jobs show was spectacular. Of course, Jobs controlled the audience, as usual, mesmerizing all of us with amazing displays of computing power. Of course, applause is frowned on in the press gallery, but by the end of the presentation, even the hard-bitten were beating their hands together.

But during a long trip back to the Midwest for the holidays, I got an up-close look at what PC owners are getting for their money. Compaq, Dell, Gateway 2000 and others are practically giving away supercomputers. Pentium IIs, running at 450MHz, 13GB hard drives, 128MB of RAM, 19-inch monitors included, for \$2,200. Sure, you can spend even less on a PC, but if they're that cheap, why scrimp?

I was expecting more megahertz from Apple. Companies are already putting out 400MHz G3 upgrade cards. I thought we were going to get 500MHz, or maybe more. Yes, I know Apple says the G3 is faster than the Pentium II at lower clock speeds; other parties disagree. All I know is, more is better.

I was also expecting lower prices. The prices on the new G3s aren't bad; \$1,599 gets you a great Mac. But you'll have to spend well over \$2,500 to get the fastest processor, plus more for the monitor.

Home Sweet Mac

However, I used a few Windows machines over the holidays, and about blew a gasket a couple times trying to get them to work. Christmas Eve — and long into Christmas morning — a team of us tried to get an interactive Winnie the Pooh toy to work. You're supposed to hook it to your PC, which you then use to program the bear to say things or play games. We tried the bear with two different PCs (Pooh isn't Mac-compatible), with no luck. "Oh bother," the little bear said as I stomped his honey-filled head.

There were problems with the CD-ROM drive; there were problems with the application. There were problems with the bear itself. Of course, I just couldn't fathom the majority of these problems, because they never occur on a Mac. If it had been a Mac, I'd have plugged it in, double-clicked and been on my way to the Hundred Acre Wood in a flash.

But the majority of PC owners have never enjoyed the relatively trouble-free environment that is the Mac, so they can't fathom not having those problems. They think Mac owners have the same problems. So, they can't understand why we pay more for our machines.

A relative owns a relatively new PC. However, the thing has a slight problem: It likes to reboot itself every so often, without warning or explanation. Parts have been exchanged, tech support called, software re-installed, with no solution. So what does he do next to fix the problem? He buys a new computer. It was cheaper and easier that way, he said. Now, you can laugh at his solution, but he probably spent less on both the old computer and his new one combined than I did on my single Mac. But then, we'll just see if he ever gets that DVD-ROM drive to work.

Don't get me wrong, though. I marveled at Jobs's demonstration of VST Technologies' FireWire external hard drive, and at Connectix's Virtual Play Station. It's not just Apple that's out there thinking with both lobes. I admire Apple's guts at putting FireWire and 100Base-T Ethernet in every G3. 16MB of video RAM? OpenGL? It feels like cutting-edge time again.

I felt proud for the people I saw carrying shiny green boxes full of G3s down the street after they'd bought them on the show floor. I especially liked the mother-daughter tag team, each carrying one end on their way to the car. The kid might not get a Pooh bear to go with her Mac, but who do you think is going to be happier in the end? I'll bet a smackerel of honey that the Mac wins that battle.



Alan Stafford
Editor in chief



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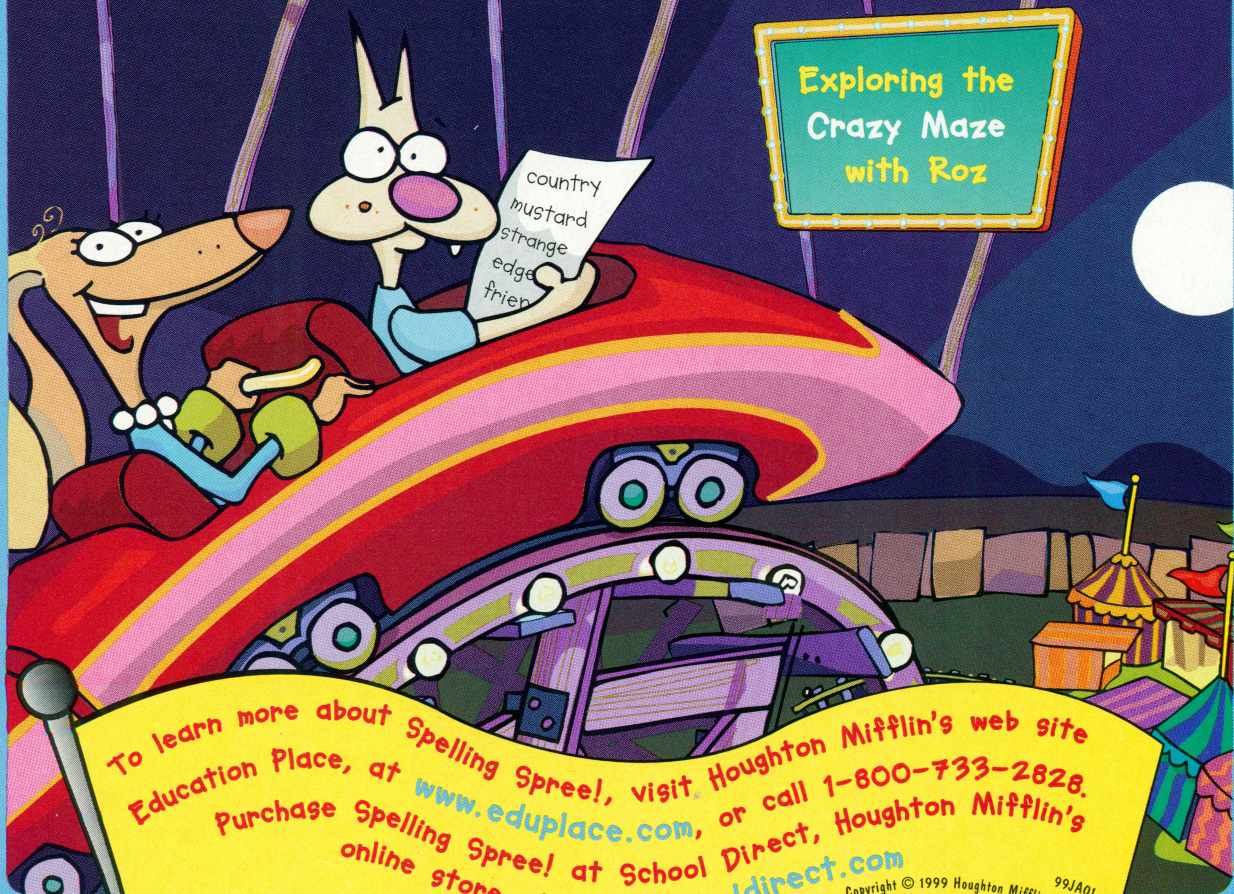
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Write On

[Your Letters]

Welcome

I just wanted to thank you for your welcoming article in *MacHome*. I am one of the newbies — an iMac trooper. I am also a convert. After years of PC drudgery, I defected. If I had known then what I know now, I never would have bought a PC in the first place. I have a die-hard Mac friend with whom I work at Micro/MacWarehouse, and he has taken me under his wing, welcoming me into the fold. Now I wear my Mac baseball cap proudly and think back in horror to my days at a PC. Thanks again for the warm welcome; it's great to be here!

Joe McGee

Play It

I saw the reference to a2b music in the December '98 *MacHome* [Entertainment] and wanted to point out that AT&T Labs has a digital music site called DigitalPhono. It has several hundred tracks of music and a Macintosh MPEG-2 player: www.digitalphono.com.

Steve Crandall

iMac Takes Shotgun!

I just purchased an iMac, and I show it off to every group that I can. This means the iMac must ride with me in the car. I just set it down on a seat and strap the shoulder safety harness through its handle and down into the catch. This must be what the handle was made for. I do get the feeling, however, that the iMac would like to be a bit taller so that it could see out of the windows.

Don Barnes

Boater's Advice: Pimpily Mice

I recently bought an iMac (revision B) and love it! I've been using Apple products since 1989 and know them well. This one is tops. I have a couple of bellyaches, though.

First, the cable for the keyboard is too short. Second, the round mouse. Now don't get me wrong: I like it and its


concept. But it is quite difficult to keep the mouse properly aligned in my hand. The solution is quite easy, however: I am a boater and so had a little roll of nonskid tape on my workbench. I simply cut two little 1/4-inch-square dots and stuck them on the sides of the mouse where my thumb and ring finger go. Now, using these little tactile prompts, I can easily keep the mouse properly aligned. The mouse really ought to have a simple design change within the mold to incorporate a little bump or pimple on each side.

Dennis Fria

Ahoy, There!

In the December '98 issue of *MacHome*, there was a letter from a Bill Brown describing his navigational software from Quintessence Designs. I've checked some catalogs, with no luck. Any idea where I can get this? I have seen lots of stuff for Windows, but nothing for the Mac.

Jan Gleason

 Sorry about the blind lead. Here's the company's Website address: www.quintessencedesigns.com.

Stormy Minds

I am writing in response to a letter from Andy Frankos-Rey, which appeared in the December '98 issue of *MacHome*. Although the CD-ROM that comes with Lego MindStorms is Windows-only, there is a Windows/Mac hybrid CD-ROM called RoboLab that will work with the RCX (the programmable brick that comes with MindStorms). This software is not well publicized, because it is distributed by Pitsco-Lego Dacta, which is the educational channel for Lego products. RoboLab is actually a superior programming language to what ships with



MindStorms (it had to be dumbed down for the consumer market). You can order RoboLab from Pitsco-Lego Dacta at 800-362-4308 for \$25. The accompanying teacher's guide

is another \$25 and is really a must in order to learn how to use RoboLab. I use RoboLab and Lego MindStorms with an after-school class (Lego Robotics) that I teach at the middle school where I work.

Marc Helfman

The Rabbit Ears Are Dead

This is in response to your article in the December 1998 issue about ASDL connections. I live on the island of Oahu in Hawaii and work for a cable TV company as a technician. We have Road Runner cable modems that work at very fast speeds. We use fiber optic and coax cables. The speed is extremely fast, with no time-outs and unlimited access, and costs \$39.95 a month.

The modem will handle up to four computers on a hub. You don't need an extra phone line, and you don't tie up an existing line. The best thing is, Macs are spoken here! I have hooked up Macs and have had no problems.

Paul Lakin

Oceanic Cablevision

Mmmm, Beige

I recently stumbled upon something quite ironic: An Apple commercial starring Jeff Goldblum had him ask, "Why have the people who made computers before never done anything but beige? That's nuts, that's nuts!" I remembered a *Fortune* magazine article on August 17 titled, "Why are computers beige?" The author writes, "Blame Jerry Manock. Manock was the product designer for the Apple II, which debuted in 1977 as the first true mass-market

personal computer, and he colored it beige — or to use the official term, 'warm gray.'" I find it quite amusing that Apple is poking fun at Wintel computer manufacturers for making computers beige when it was Apple itself that created the standard of computer color we now know as ... beige.

Daniel Vanwie

Read the Fine Print

I have been looking at printers and reading the reviews in *MacHome* and other journals for more than a year now. I am looking for the best printer to handle text: résumés, letters, and, at times, a color chart or graphic. So I greeted your December '98 feature on color printers with enthusiasm. Finally a review of all these new printers that I hear do just as well as the lasers at half the cost. I am disappointed. There was no mention of handling text. Oh yes, the article hinted at a text evaluation in giving an overall best score to the Epson Stylus Color 850. But is the text really great or what?

Please, give us an evaluation of text printing quality and ease of use. How do these printers compare with the lasers for text? The stores do not give text demos — only color graphics with a bit of blurry text. I assume they can do better.

Tom Dorn

Tom, my apologies for neglecting to address text quality in my review of color printers! Although text quality was very much a focus in my article on laser printers, when it came to color, I focused on color matching, photo realism, and gradient reproduction. Here's the missing information.

In terms of text quality, the results for the inkjets (the Hewlett-Packard 1120C and the Epson 850, 740, and Photo EX) were pretty much the same: Using inkjet-quality paper, text was a little pixelly when you look at the pages up close; they were similar to 600 dpi laser output. Using photo-quality paper (the more expensive stuff), text was much sharper — close to, but not quite, razor-sharp.

The Alps MD-1300, however, which is not an inkjet but rather a dye-sublimation printer, produced bona fide razor-sharp text even on its lowest-quality paper and using its lowest-quality inks. Keep in mind, however, that at these settings the color reproduction was woefully lacking compared with the inkjets, and that at the highest settings, at which the Alps pulls ahead in image quality, the cost of materials goes way up, and the time it takes to print a single page stretches to more than 10 minutes.

When color laser printers become affordable, they will provide the perfect marriage of speed, color quality, and sharp text. But until then, inkjets still make the best color printers for all-around use.

David Weiss

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Polished Apple delivers New Macs, Q1 Profit

Once, Apple was ill prepared to weather the Wintel onslaught that was slowly but surely usurping its hard-won market share. But those days are gone — Apple electrified the San Francisco Macworld Expo in January with a strong showing of new products that are sure to please the faithful and expand the platform's appeal beyond the usual suspects. And the next week, the company cited strong iMac and OS 8.5 sales when it announced a profit of \$152 million for its first financial quarter of the year. That's substantially more than the year-ago results of \$42 million, and up from last quarter's \$106 million profit. Apple had \$1.7 billion in total revenues during the quarter.

Flanked by 2001: A Space Odyssey's ever-intimidating HAL computer on the Expo stage, Apple's "iCEO" Steve Jobs announced a new line of translucent blue-and-white G3-based desktop

systems that replace the current high-end machines during his spellbinding keynote speech. Based on a new system design code-named Yosemite, these bad boys use a 100MHz system bus and will ship with 300MHz, 350MHz, or 400MHz processors, equipped with 512KB or 1MB of backside cache running at a 2:1 ratio. The systems will ship with 64MB of RAM, expandable all the way to 1GB! As for storage, the systems can hold up to 100GB, with three drives in RAID formation.

Of course, Apple's always working on faster, better versions of its products; no surprise there. The big news: these systems use a new logic board design that eschews the tradition of serial and SCSI ports in favor of USB and 10/100 Ethernet ports like the iMac — and unlike the iMac, a very fast FireWire port for high-speed peripherals such as professional video gear.

FireWire is like USB's hyperactive cousin. While USB tops out at 12Mbps, FireWire can support speeds up to 400Mbps. It's an all-digital interface that is in limited use, mostly for video. But like USB, it's an architecture that's poised for rapid growth. Just as manufacturers met the iMac's success with scads of USB products, the inclusion of FireWire on these machines will likely inspire a similar flurry of development.

FireWire is not new; it was first proposed as a standard by Apple in 1995 and has since been revised by other companies. Adaptec has marketed a PCI-based FireWire card for several years now, but this is the first time it has appeared on the motherboard. One of the show's most haunting moments came when Jobs connected and disconnected FireWire cameras and hard disks randomly, disturbing the G3's operations not a whit.

Though the new G3s do not have SCSI connectors, Apple is offering SCSI as a \$49 option. Other vendors, such as Adaptec, Imagio, and ATTO, sell SCSI cards for PCI slots; Griffin Technology has also announced a \$49 serial adapter. The new systems have four PCI slots, one of which is filled with a 16MB ATI Rage 128-bit graphics card. This, along with Connectix's Virtual Game Station announcement (see Entertainment News), should give Mac gamers a reason to smile again.

Don't Drop the Soap!

MetaCreations is fighting against dirty pictures on the Web (no, not those kinds of pictures ... what did you think we



were talking about?) with its new Photo Soap 2 application. The program helps you touch up red eye, incorrect background colors, and other imperfections in digital photos, and converts images into HTML documents so you can get 'em on the Internet quick-like. The \$50 package includes a feature that lets you create 3D picture cubes for Web deployment, as well as "PhotoMailer," which lets you e-mail interactive slide shows. MetaCreations, 800-472-4564; www.metacreations.com

Fire in the Hole!

Newer Technology is whipping up two sassy FireWire gadgets that should make the new G3 machines into video powerhouses. No, really.

In the spirit of Radius' late, lamented VideoVision, Newer's FireStorm AV will be an external "breakout box" with a phalanx of composite and S-video inputs and outputs, as well as audio connectors, to capture video at 30 frames per second at 640 x 480 pixel resolution.

A similar model, the FireStorm DV, will be specialized for converting digital video (DV) signals to analog format. Pricing isn't finalized, but Newer said FireStorm AV will cost around \$179, while the DV model will be about \$200.

Newer Technologies, 316-943-0222, www.newertech.com

continued on page 11

Polished Apple

(Continued from pg 10)

Various configurations of the new G3s are available, ranging from \$1,599 to \$2,999 — a surprisingly low price at the low end in particular. Apple VP Phil Schiller told *MacHome* this represents a shift for Apple. “Years ago, we might have come out high, then brought the price down over time, and got as much as we could out of the first buyers. For the past year, we’ve been coming out as fast and as aggressive [in price] as we can.”

Plastic Surgery

Perhaps the largest buzz was created by Apple’s new five-color iMac lineup. Yes, the new generations of iMacs come in blueberry, tangerine, lime, strawberry, and grape colors, and might be mistaken for oversized Gummi candies. Though the change seems chiefly cosmetic, showgoers were very enthused at this new choice of colors. What peripherals vendors, many of whom had only just begun to ship matching bondi-blue gizmos, have to say about the new colors remains to be heard.

The new iMacs are faster than before — 266MHz, compared to the first generation’s 233MHz — and are \$100 less, at \$1,199. But they do not include infrared connectivity or the original iMac’s “Mezzanine” slot, which was tapped by several vendors for expansion cards. Apple said the infrared port was dropped because of USB’s success, while the Mezzanine slot was only intended to be used for development and testing purposes. The slot’s removal has drawn protest in some circles,

but Schiller said it was to be expected. “We said from day one that that’s not supported,” he said. “We told them it would go away.”

The original bluish iMac? It’s still available, with a lower price of \$1,049.

Displays En Regalia

Apple’s parade rolled on with three new Studio Display monitors in resplendent blue and white. A 21-inch model, based on a Sony Trinitron tube and equipped with ColorSync, costs \$1,499, but Apple says it will only work with the new USB-equipped G3s. A 15-inch flat-panel model — a less-expensive and slightly redesigned version of the original Studio Display — lists for \$1,099.

At the low end, the company offers a 17-inch model for the bargain-basement price of \$499.

Shades of OS X

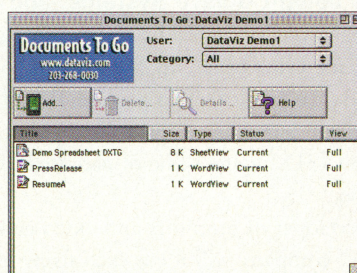
As for software, Apple previewed its OS X Server, which it said would ship in February 1999. The software has potent implications on the corporate side, as it incorporates many of the UNIX niceties that pervade the Web. Additionally, it can support some hefty connection demands, as Jobs demonstrated by using it to hook up a new G3 to 50 iMacs, each running various QuickTime movies in full-screen mode. The software will include Apple’s WebObjects 4 package for high-end, cross-platform Web applications.

The company did not announce the streaming version of QuickTime that was expected, but c’mon, look at all the other stuff it announced. *Look.*

Just Walk Away

DataViz’s new **Documents to Go** program lets you transfer standard word-processing and spreadsheet files (such as Microsoft Office, Corel WordPerfect or Apple’s AppleWorks) straight to your Palm Pilot without that annoying file-conversion hullabaloo. Then, as the saying goes, you’re free to go.

Documents to Go uses the Palm’s HotSync function to make sure you get the most current version of your manifesto. It’ll be released in the first quarter for \$40. DataViz, 800-773-0030, www.dataviz.com



Weird Tales of Storage

Sheesh. There are so many storage options these days, it’s not even funny. Here are a few of the recent developments:



- Castlewood Systems showed off SCSI, USB and FireWire designs of its ORB at Macworld. The SCSI version was slated to ship in February, while the others are “anticipated” in the second quarter of this year. Swoon.

The \$199 ORB should make for stiff competition in the removable category, offering a beefy 2.2GB of storage on each \$30 cartridge.

- VST Technologies wowed Expo attendees with a prototype of a teensy FireWire drive, demonstrated by Steve Jobs.

Prices aren’t announced, but the VST Blaze drive will ship late in the first quarter, followed by a pocket-sized model in the second quarter. Capacities will range from 4GB to 14GB. VST will also have removable-cartridge, magneto-optical drives in 640MB and 1.3GB designs.

Additionally, VST is now marketing the \$99 USB floppy from YE Data that we reported in the February issue.

- DataZone Corp.’s videotape-size DataBook drives connect via USB or PC Card adapters. Ranging from 2GB to 14GB, they cost from \$349 to \$1,149.

Castlewood, 925-461-5500, www.castlewood.com
 VST, 978-263-9700, www.vsttech.com
 DataZone, 888-660-8688, www.datazonecorp.com

129 1/4 +6 MSFT 150 1/2 +4 MOT 68 1/4 +1/4 ADBE 48 1/8 -3/4

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MacTicker uses your Web connection to access financial data from several sites, including Yahoo!, Quote.com, and iMoney, and updates the figures, adjustable from every minute to once an hour. Selecting a particular company from a pull-down menu gives you detailed information on that stock during the past year. Such a potent financial tool, yet only a paltry \$25.

Reuven J. Sherwin's \$10 NewsTicker acts similarly but scrolls the news headlines instead of stock prices. You can, of course, select the news pages from which to cull headlines. Just be careful, as it can be hard to concentrate at work with such lines as "Farrah's Son in Rehab Hell!!!" and "Hello Kitty Shocker!!!" scrolling by.

Galleon Software, 888-546-1777; www.galleon.com

NewsTicker, hyperarchive.lcs.mit.edu/HyperArchive/Archive/comm/newsticker-15.hqx

Isales show healthy rise **CNN™** Professor warns courtroom

Decompression Chamber

As reported last month, Aladdin Systems has long worn the data compression/decompression crown. But MindVision Software is preparing a contender on the decompression side, called MindExpander. The company says the free software will decompress files in dang near any format, including StuffIt (.sit) and Zip, for those pesky PC-authored files.

Why bother, we asked a MindVision rep at the Expo. "We wanted to give people an alternative to StuffIt," he said. "Especially since StuffIt 5.0 files can't be decompressed with earlier versions of Aladdin's software. And MindVision doesn't add any extensions or "engines" to your system folder."

MindVision, 402-477-3269, www.mindvision.com/Consumer/

Mergers and Buyouts and Acquisitions, Oh My!

Where do we start? Adobe Systems bought GoLive Systems, and not for the name. Adobe coveted GoLive's fabulous CyberStudio for its professional Web-authoring tools, and now it's theirs. Can't beat 'em? Buy 'em.

3-CD Digital, based in Salt Lake City, announced its intent to acquire 3D software stalwart Strata Corp. for an undisclosed sum. Coveting seems to be present here, as the company said, "This will broaden C-3D Digital's line of patented 3D technology for broadcast video and the Internet."

And plucky Radius Inc., a longtime Mac developer of monitors and video gadgets, changed its name to Digital Origin. The "new" company will focus exclusively on cross-platform digital video software. One might conclude that some ennui is present at Digital Origin, despite the excitement of the digital video market in general. CEO Mark Houseley's statement read in part, "This is as dramatic as it gets for us."

Mount Olympus

Before the mountain falls. Heh, heh. Anyway, Olympus has a very cool new photo printer, the P-330, that works with serial or video connections, as well as with SmartMedia cards (as used in digital cameras). It'll print you out a photo in two minutes, and



get this — it can do it without even being connected to the computer. Just hook up the camera or insert a SmartMedia card. All this and more for just \$449.

By April, Olympus will also have a new camera, the D-340R, also priced at \$449. It'll have 8MB of Flash memory and an Image Inspection feature for zooming into a picture on the 1.8-inch LCD, and it includes the FlashPath floppy adapter that supposedly really does work with Macs.

Olympus, 800-622-6372, www.olympus.com

The 800 Club

Epson wants you to enjoy its Expression 800 scanner. Its 36-bit, 800-by-3200 dpi hardware resolution can be improved with advanced scientific methods (software interpolation, actually) to 12,800-by-12,800 pixels, which is a lot, you know. Three separate bundles, at \$699, \$799, or \$999, are available, depending on the configuration, software and accessories you choose.

Epson, 800-463-7766, www.epson.com



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eye On iMac

By John Poultney

Here Comes Video!

Desktop video is coming to the iMac from two separate vendors, both of which showed their products in action at the Expo, and this is exciting news. In fact, if you're not excited, there's something *wrong* with you.

- Avid Technology's Cinema for the iMac will combine its fabulous Cinema video-editing package with a USB-based video-capture box for composite or S-Video input. Expected in the second quarter for \$299, the package will digitize video at 30 frames per second (fps) at 320 x 240 pixels, Avid said. A future release will support video out.

Avid's video-capture box was developed by Escape Labs, a new company composed of former ixMicro employees who wanted to bring cool new technologies to the Mac platform. Escape hasn't determined if it'll offer its own version of the box, but we still say *huzzah!* to its efforts thus far.

- Ariston's iView, available now for \$120, can capture 30 frames per second at 160-by-120

pixels. It only has composite video, however, and also has no video out. The included software supports BMP and AVI video files as well as more Mac-like data types.

Avid Technology, 800-949-2843, www.avid.com

Ariston, 800-326-5294, www.ariston.com



¡Viva los Printers!

Hewlett-Packard and Epson have new printers up their sleeves, aimed at us iMac folk.

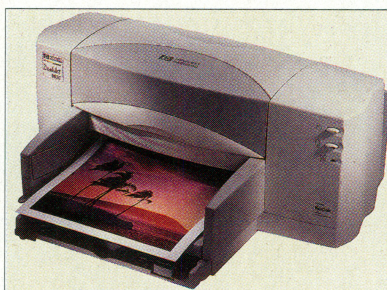
- HP's DeskJet \$299 882C can print five color or eight black-and-white pages in a single minute. Complementing HP's previously announced and slightly slower 895Cse USB printer, the 882C will have built-in USB and will be capable of "hand-out printing," suitable for political rallies,

wherein four small document images are printed on a single sheet. Also, an Instant Delivery function will let you schedule automated printouts of Web pages, so you can grab the latest headlines off the printer before your morning coffee. Aaaaaah.

- Epson's Stylus Color 900, which ships this month for \$449, has a resolution of 1440 x 720 pixels, and sports an ink-droplet size of 3 picoliters (said by Epson to be the industry's smallest — that's three-billionths of a liter, you know). Aside from USB, the printer also has built-in serial and parallel ports. A networkable version is also available for \$649.

Hewlett-Packard, 800-552-8500, www.hp.com

Epson, 800-463-7766, www.epson.com



Swivelin' iMac

CompuCable's iDock provides a swanky little swivel stand for your iMac,

as well as a bunch of ports so you can connect your old, weatherbeaten peripherals. The

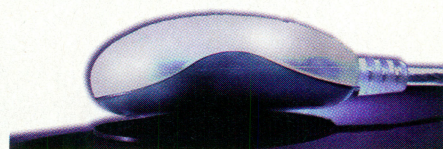


\$200 iDock has two serial, one parallel and three USB ports. Future revisions will include ADB, SCSI and a floppy drive. Not earth shaking, technology-wise, but it's nice to have all these in one well-integrated unit. CompuCable, 714-557-5510, www.compucable.com

House of iBuggin'

miro Displays rolled out a mondo cool USB peripheral at Macworld Expo — one that lets your iMac act as a professional color-matching system. This capability was previously only available with color-matching monitors, which tended to be quite dear; miro's iBug is but \$120.

The iBug, measuring a petite 1-by-1.75 inches, has automatic ColorSync profile creation to help with the charac-



teristics of scanners, digital cameras, and color printers.

Potential uses are vast, but they include print-to-screen color matching, photo retouching, and general graphics tasks. Don't underestimate the importance of correct color implementation if you're trying to sell such things as antiques and clothing over the Web, by the way — customers tend to get irked if the colors aren't what they saw in the catalog.

miro Displays, 650-988-7270; www.mirodisplays.com

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Keep on Scannin'

The scanners, they just keep getting closer to the iMac gestalt all the time. Here's a couple of the latest items:

- Agfa released a blue translucent version of its SnapScan 1212U, which looks like something Jaques Cousteau might find in the depths of the Marianas Trench. Rest assured, however, that the \$130 scanner has the same 36-bit, 600-by-1200-pixel resolution and built-in USB of the original model, which was — how can we put this — *beige*.
- Epson also released a USB model of its Perfection 636 scanner, first seen in a SCSI design a few months back. Slated to ship this month, the scanner has 600-by-2400-pixel resolution. A transparency sheet option is \$99 and an automatic document feeder is \$199; otherwise the basic unit will list for \$230.

Agfa, 888-281-2302, www.agfa.com

Epson, 800-463-7766; www.epson.com



iMaccessorize Yo' Bad Self

MacTel Corp. has formed a separate "iMaccessories" division that is devoted to all things iMac. A spin through its website is a trip to translucent heaven; here you'll find one-stop shopping for hubs, mice, joysticks, numeric keypads, cables, what-have-you. You might have to do a little searching, but you'll find such gems as a USB-to-gameport converter for \$25, and various other goodies. You might, *might* even find the elusive SCSI-3 card for the original iMac's Mezzanine slot.

iMaccessories, 888-622-8355; www.imaccessories.com.



SCSI, Flash, and now MIDI!

Rapture! More converters are available for converting those other *loser* signals into USB.

- Newer's uFlash reads compact flash cards from digital cameras and PDAs. A SmartMedia version costs \$99, while a CompactFlash design is \$89. And its uSCSI USB-to-SCSI converter should be a useful little thing as well; it's translucent, blue and \$79.

- Second Wave bucks the translucency trend with a bright yellow converter called the SCSI Bee. The \$79 device does what other USB-SCSI adapters do, except it's, uh, yellow.

- At long last, MidiMan answers the anguished cries of "what about MIDI?" with the USB Midisport 2x2, a 2-in/2-out MIDI connector. Priced at \$130, the adapter will let you hook up your keyboards and

turn your iMac into a neighbor-taunting music machine *par excellence*.

Newer, 316-943-0222, www.newertech.com

Second Wave, 512-329-928,

www.2ndwave.com

MidiMan, 800-964-6434,

www.midiman.com

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This ad was created and color separated using nothing but DenebaCAD and Canvas 5.

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"The program's best features spring directly from Canvas's signature strength - the marriage of bitmap and vector technology... Deneba's SpriteLayers technology lets you create some interesting transparency effects that would be difficult if not impossible to make in a **dedicated drawing** program... We were also impressed by Canvas's new face lift, which helps your workspace stay better organized and perform more efficiently... In the competition of the graphics titans, Canvas 6 is fighting with a unique set of weapons."

Macworld — Feb., 1999

"With it's elegant interface, Canvas is a compelling alternative to suite-based solutions that require separate illustration and image editing programs to perform the same functions... Canvas has always performed well with technical illustrations, featuring extraordinary dimensioning capabilities and numerous precision drawing aids... The program warrants serious consideration from newcomers seeking an elegant and relatively inexpensive tool."

PC Magazine — Jan., 1999

"SpriteLayer technology represents an industry breakthrough because it allows users to apply an unlimited variety of compositing effects to any type of object or group of objects... [SpriteLayer] technology is an excellent piece of programming wizardry. With it, designers can easily experiment with complex graphic ideas that would have been prohibitive or impossible in any other program... Deneba has given designers a creative tool that makes it more convenient than ever to play around with any and all of their graphic elements in one place."

Digital Design & Production — Jan./Feb., 1999

"Canvas 6 is sure to please faithful users..."

My favorite feature is Canvas's new SpriteLayer technology, which allowed me to control the transparency of any graphical object, text, photo, or vector illustration... Canvas continues to deliver a vast scope of graphics tools in one convenient application, and does a remarkable job of breaking down barriers between bitmap and vector graphics."

PC World Online — Dec. 28, 1998

But everyone else beat us to it.

"Version 6 has dramatically improved the software's interface, significantly increased user customization and added lots of useful features... Canvas 6 delivers power and versatility at a competitive price."

eMediaweekly — Jan., 1999

"Deneba has done what Adobe has refused to do: unify graphics apps... The vector abilities are very robust. Canvas has all the tools you'd expect of an illustration app, with bonus widgets thrown in... Canvas 6.0's unique ability to combine disciplines will lead the designer down previously inaccessible creative paths... SpriteLayers composite like no other program can."

Maximum PC — Jan., 1999

Find out for yourself why everyone's talking about Canvas 6 and the revolutionary new SpriteLayer technology. Visit www.deneba.com/machome/ to download a **FREE** fully functional 30-day evaluation kit. The graphics revolution is here, and it begins with Canvas 6.

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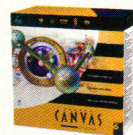


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Then there's the money that's just sitting in your savings account. About the only thing that isn't dusting the inflation rate these days is your trusty passbook savings. Two percent interest: My, but that will make for a lovely nest egg.

If the measly bone that your bank throws you bothers you, you may be seeking options, one of which is investing online in stocks, bonds, and mutual funds. But for people for whom the words "net worth" don't come up very often, throwing hard-earned money in with all those seasoned pros may feel like throwing money away.

How do you equip yourself so that you're actually investing and getting a return, rather than gambling and getting a kick in the rear? You educate yourself, starting right here.

Sheep Among Wolves?

Has the advent of online investment sites brought in novice investors who shouldn't really be there? "That's one I hear a lot," said Michael Gazala, senior analyst with Forrester Research, which analyzes the effect of technology on business and consumers. He argues that the

what's yours" approach: "An inexperienced investor is not a sheep going to the wolves; it's a sheep going into a market of bulls and bears," said Kris Skrinak, a former broker and CEO of ClearStation, a financial advisory Website. "Bulls make money, and bears make money, and sheep get slaughtered. That's an old rule — it's a turn-of-the-century expression

that means just as much today as it ever has." Skrinak points out that investors can make money whether a stock is going up — or down — by selling the stock "short." The majority of the people out there are unguided and are being led to slaughter, he adds. "The name of the game is to be a bull or a bear."

Beginning investors often worry that when professional stock traders get hot tips,



Web has little effect on the investment decisions people make. "A bunch of amateur investors could have traded prior to the Web; all they had to do is make phone calls," Gazala said. "It may be easier for them to do so, but it's still an unsolicited trade that you enter online rather than via phone call."

Then there's the "get in there and take

they act on them first, then tell people about them to increase their fortunes. Institutional investors do have some advantages over the individual investor, mainly in the form of sophisticated tools, but the Internet has leveled the playing field. "There are always more sheep; institutions are sheep, too," said Dagny Maidman, a personal-finance

Sell High

The Basics of Online Investing

by alan stafford

consultant for a large investment bank. "Not everyone gets the news at the same time. If you're a day trader [someone who buys and sells stocks quickly, trying to make money by anticipating small fluctuations in their price], it might matter, but if you're an *investor*, I don't think it matters that much," she said. "If the market perception of a company is changing, then you'll have plenty of time to get in. It's not like you have plenty of time, but the fact that I [as a professional investor] might hear something more quickly doesn't mean that it's too late to get in. If you miss a point or two, that's not a reason not to buy a stock that's about to move 50%."

However, some investors still fear that the information they get, either in written materials or online, is too old to act on by the time it arrives. "Everything is past tense, unless you do your own research, which I don't do," said Maidman. "That's just the way it is. It's past tense, but you're thinking about what the prospects of the company are in the future. If that's so, the way to beat the sheep mentality is, you think for yourself — you take a risk."

A common perception of professional traders is that they buy and sell stocks quickly, hitting and running, but Skrinak says that's not true. Professional traders frequently deal with large

chunks of stock that can't be bought or sold all at once. Further, if a trader tries to buy or sell too large a number of shares in too short a time, it can affect the price of the stock, making subsequent transactions less profitable. Most individual investors don't have such horrific problems.

Despite the popularity of Internet trading, it may not be for everybody. "If you're either not interested or just don't have the time or you really do seek the opinions or guidance of a third party, use a human broker, certainly," said Gazala. "A human broker is going to be able to analyze a huge amount of information and convey it more quickly, more efficiently, than you're going to find in the online channel. There's a lot of assuredness you get out of an interaction with a human broker that you're not going to find in an interaction with a player like Ameritrade or E-Trade [online investment sites]."

Going Back to School

But you still may have doubts about your ability to invest wisely, despite your ability to buy and sell quickly and anonymously. If you don't know what you're doing, how do you learn? It doesn't help that being successful in the stock market is regarded as something of a black art. "It's definitely not a skill; it's

an art," said Mark Torrance, CEO of StockMaster, an online investment tracking and education service (and one that uses Macs in its offices). Can you learn to be artistic? Perhaps.

"In my case, I used to rely on brokers' advice," said John Cascone, a board member of the San Francisco chapter of the American Association of Individual Investors. The AAII is a nonprofit group that seeks to educate and inform investors about the market. "I retired in 1989, and I decided this is serious money now, this is my retirement," he said. "So I took more than a year — and I had been in the market for years and years — and just read and read. You just can't understand some of the stuff that I took for granted before."

The AAII has about 180,000 members nationally, and it puts on educational programs and seminars nationwide at which professionals and academics speak. Volunteers run the chapter meetings; membership is \$49 a year. "We expose people to a wide range of investing so they have more information when they invest their money," Cascone

said. AAI's Website offers links to Mac-compatible investing software, too.

Most experts still recommend a mix of traditional investing tools, such as newsletters and books. ClearStation offers a list of recommended books on its site, some of which date to the 1920s: Skrinak said the basic investing concepts haven't changed since then, even with the added complication of the Internet. Stan Ehrlich, assistant treasurer of the San Francisco chapter of the AAI, said he still subscribes to *Value Line* and *Zacks* newsletters; *Value Line* comes with a CD-ROM. Maidman said simply reading magazines can tell you which companies are good investments. "I think anybody who thinks about it can make investment decisions," she said.

Ehrlich adds a heavy dose of CNBC (a cable television station that runs many financial shows during the day). However, like many individual investors, Ehrlich is turning to the Internet. "AAI has some of this [information], but it's updated quarterly," he said. "Some others have it updated monthly, but on the Internet, it's updated immediately."

Many sites, including those of the major stock exchanges, provide current prices on any publicly traded stock. However, some investing sites go one further by allowing you to track stock performance and transaction activity via online portfolios — either real or not. Both StockMaster and ClearStation offer such portfolios, and they're free. You can store stock performance data over time (not just current prices), with charts for several indicators, plus news about those stocks, and thus try out trading before you actually risk any money. When you do get around to laying your money down, such portfolios can help identify trends and possibly anticipate buying or selling opportunities.

"If I had a recommendation for any beginning investor, it's 'Don't invest for three months. Play invest instead,'" said ClearStation's Skrinak. "It's very easy to do, and it's free."

Check Your Wiring

The Internet's ease of distribution and access has made it the investing tool of choice, and not just for the single act of making a trade; it's a repository of information. "It's easy, and [it's] overwhelming how much information is out there," said Cascone. "And it's relatively cheap."

"There's access to tools and technology, commentary, data and information, and portfolio management that never existed before," said Forrester Research's Gazala. "They were only available to institutional investors or to high net worth individuals, but all of this is opening up to a broad range of individual consumers," he said.

Investing Websites are among the most popular of all Internet sites. Some sites

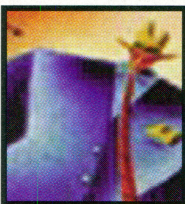
helped," said Gazala. "Historically, we've seen that a lot of these stocks are extremely thinly traded, so you don't need much volume to move the price." Skrinak takes a different view (but for more widely held stocks): "The people who can move the market are the people with the money, not the people with opinions," he said. However, just because the pumper's ruse doesn't drive up the stock price doesn't mean you won't get suckered. "Without a doubt you should be cautious about acting immediately on what you read [in chat rooms or newsgroups]," said Gazala. "Consider the source."

The trading sites themselves are in fierce competition; that's why Internet trades are going for as little as \$8 each. "I always recommend doing something like sending an e-mail and seeing how long it takes for them to respond, because the primary way you're going to correspond with an online broker is via this fourth channel, via the Net," said Gazala.

One thing is clear: Many individual investors are heading for the Internet. Ehrlich said he has had an account with Merrill-Lynch for 30 years, but he only uses his broker to buy bonds. "The commissions are much more expensive; online, I pay \$29.95 for a trade with Charles Schwab, but it might be two, three hundred dollars for the same trade with Merrill-Lynch."

Gazala was more blunt: "Anyone that's going to try to tell somebody that an equity [stock] trade is deserving of a \$150 or \$200 commission is out of their mind. This is a product that has been clearly exposed as a commodity."

Then there's the small controversy over real-time quotes. Most stock prices that you see on the Internet are reported 15 to 20 minutes after they were posted; frequently, the price you pay is different from the price you see in your browser window because the prices aren't updated continuously (in real time). However, StockMaster's Torrance said most individual investors don't need access to real-time quotes. "Just pick good, solid companies and don't worry about the short term; that's investing," he said. "Certainly there's sport in [day trading], but that's



"Anyone that's going to try to tell somebody that an equity trade is

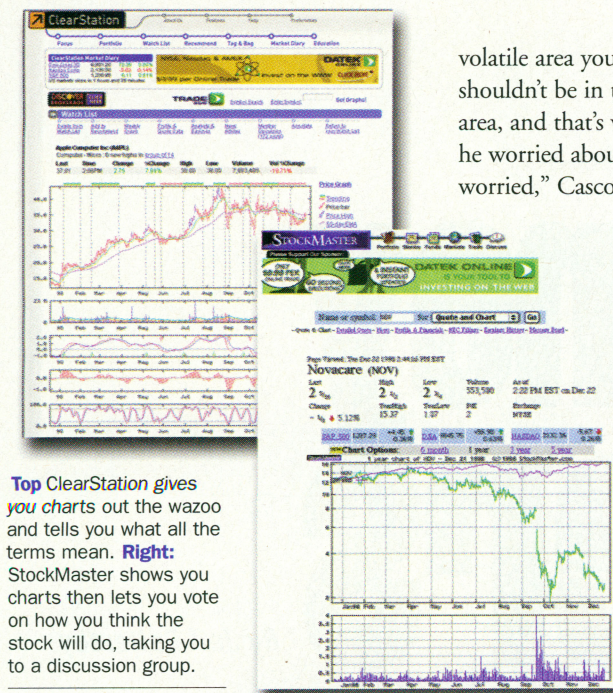
deserving of a \$150 or \$200 commission is out of their mind. This is a product that has been clearly exposed as a commodity."

Michael Gazala, Forrester Research

charge fees for access to certain features, but much of it you can get from sites that are advertisement-driven. Another way to get information is via online brokers, many of which offer some of the same services free or at a reduced rate to their customers.

ClearStation and other sites offer automatic e-mail alerts that tell you when a stock has hit a predetermined price, has had a sudden increase in trading volume, or raises other red flags. Sometimes it's hard to keep track of all the indicators, and such alerts may indicate it's time to buy or sell.

Depending on whom you ask, Internet newsgroups and chat rooms are a force in online investing. Both have a reputation for people using them to "pump" stocks (talking a stock up in an attempt to raise its price). Does that really work? "It has



Top ClearStation gives you charts out the wazoo and tells you what all the terms mean. **Right:** StockMaster shows you charts then lets you vote on how you think the stock will do, taking you to a discussion group.

not the path to long-term riches.”

Regardless, you don't have to pay for real-time quotes. Many online brokerages give you a certain number of them when you place a trade. Or you can get them from Thomson Investors Network, just by filling out a form.

Strategizing

Once you've sent off a check and opened a brokerage account, it's time to develop a plan. Everyone we talked to recommended having a strategy for making money.

“The degree to which you have confidence in your ability to invest determines how much of what you're doing is speculation versus investment,” explained Skrinak. “If you don't have any strategy at all, then it's all speculation. If you're not investing on strategy, you should really have someone else do it.”

Beginning investors often spend their first money in a couple of time-honored ways. One, the magic bullet: They look for the one high-risk stock that will make them rich. Two, the blue-chip: They drop all their money into a big Wall Street name. While either might work, neither demonstrates in-depth strategizing.

“Largely, the market works on earnings — consistent earnings,” said Cascone. He invests largely in tech stocks and biotech companies; he also buys stock in small companies. “It's probably the most

volatile area you can find. I'm 69, and I shouldn't be in that area at all. I like the area, and that's why I'm in it,” he said. Is he worried about the risk? “I'm always worried,” Cascone said. “But with most retirees today, you're not gambling that you won't have breakfast on the table tomorrow morning, what with Social Security and other income.”

Skrinak recommends a narrow focus. “I think you need to know what your strategy is for keeping [the number of stocks you pick] small. “People around here, for example, follow technology. People in San Diego follow biotech and telecom. People in Philadelphia follow medical. Who am I to say what stocks they should be looking at? If you know biotech or medicine, you should be following Merck, that group. And you'll make more money doing that because you know that [group].”

Ehrlich counsels diversification and watching a stock's price-to-earnings (P/E) ratio. “Because there's so much uncertainty, I hedge my bet by diversification,” he said. “I think the mistake that most people make is that they lean totally in one thing. Because we're in California and there's so much technology in the news, they may be all in technology. Or, if they're older people, they may be all in utilities. I think they should be diversified into at least four or five different sectors that don't relate to each other [to protect against single-sector slides].”

Maidman manages millions, but her advice for those starting out may shock Mac owners: Buy Microsoft. “If you're young and you are willing to withstand market fluctuations, I think you should buy some of the best companies, no matter what the multiple [P/E ratio] is. I think if you can afford 50 shares of Microsoft, that's all you need to get started. I think the less money you have, the less diversity is important.”

StockMaster's Torrance threw another consideration into the mix: sleeping. “People often have a knee-jerk reaction. They say they're tolerant of big surges and that they're in it for the long run, but they can't sleep at night. It's hard to put a price on sleeping at night.”

In the end, the strategy you create should be your own. Skrinak puts it succinctly: “I think a lot of these data points, you just digest them. You eat a little bit of technical, a little bit of fundamentals, and then basically it's going to turn into gut instinct, and that's what your strategy is. The best traders trade through intuition. And I can't tell you what the hell they do. After studying them, having a beer with them, just demanding to know, they wouldn't tell me, or they couldn't tell me. But there is something about their notion of the right stock and executing a trade with no hesitation that I can only call intuitive.”

Wanna Trade?

The impressive growth of online investment tools has done much to enable individual investors to succeed in the stock market. If you want to see results better than those from your passbook, perhaps it's time to try your fortune online. **III**

Online Investing Websites

American Association of Individual Investors
www.aaii.com

ClearStation
www.clearstation.com

Invest-FAQ
www.invest-faq.com

Motley Fool
www.motleyfool.com

StockMaster
www.stockmaster.com

TheStreet.com
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Thomson Investors Network
www.thomsoninvest.net

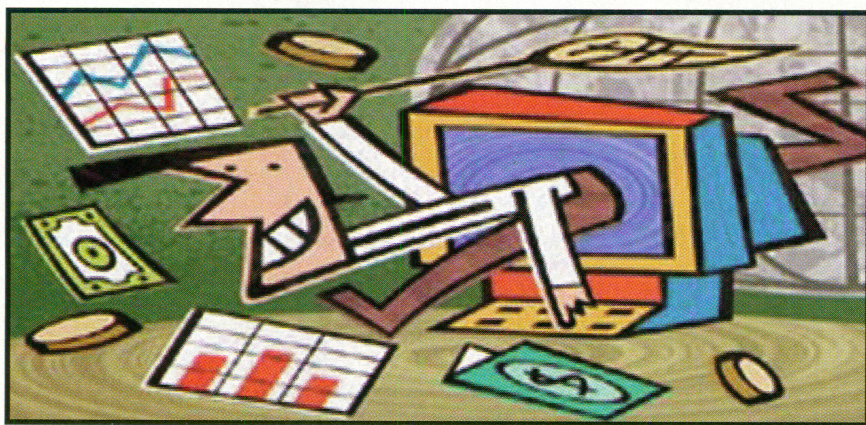
Value Line
www.valueline.com

Zacks Investment Research
www.investools.com/cgi-bin/Library/zacks.pl

money matters

By Jeff Battersby

Using Your Mac to Watch That Bottom Line



Wampum. Shekels. Lettuce. Moolah. Boodle.

Bread. Gelt. Beans. Berries. It doesn't matter

what you call it, if you can't get a handle on your money, your business is bound to go **bust.**

Fortunately there are several programs available,

both shareware and commercial, that can easily

help you keep your financial house in order.

A Brief Account of Accounting Packages

Contrary to popular opinion, accounting packages on the Mac are legion. Which one is best for your business?

Quicken is the venerable workhorse of home finance. Bet you didn't know that Intuit's Quicken Deluxe 98 has some pretty decent tools for business finance. Sure, they're a little sparse. But there's enough here to get you started. And it's simple to upgrade from Quicken to QuickBooks, a more full-featured tool, but one that has been sitting in a state of suspended animation for about three years now. Still, it remains one of the easiest business accounting packages on the planet. QuickBooks Pro is QuickBooks' bigger, stronger sibling. More features. More tools. Fatter price — but also in suspended animation.

Like QuickBooks, M.Y.O.B. has been around for quite some time. (Although Best!Ware almost never spells it out, in case you're wondering, it stands for "mind your own business.") Unlike Intuit, with its hands-off approach to QuickBooks, Best!Ware has continued to upgrade M.Y.O.B., adding new features with each new version.

Aatrix Software has created a small universe of business products for the Macintosh, and Aatrix Mac P&L (profit and loss) is but a single shining star in a

growing constellation. Aatrix Accounting 3.0 is designed to be a full-featured version of Mac P&L.

Big Business 2.5 is a powerful business management program built on the foundation of 4th Dimension's 4D database engine. It's also compatible with Big Business for Windows.

How much power can you fit into a small shareware accounting package? Symmetry's NetBooks packs a powerful business accounting punch in a package that costs less than \$80.

User Interface

Face it. If you wanted to spend your time ruminating over the finer points of double-entry accounting, you would have become a CPA. A good small-business accounting package should insulate you from the intricacies of accounting while handling all of the important details. If you feel like you need an accounting degree to use a program, it's probably not the one to use.

Quicken has earned its reputation as the easiest personal finance package available on any platform. It uses a model that we're all familiar with: a checkbook. The program allows you to peruse registers easily and access specific functions with a single click, making navigation a cinch; it's possible to jump from data entry to reports to loan calculation without ever touching a menu. Quicken, however, is geared more toward personal finance than business finance.

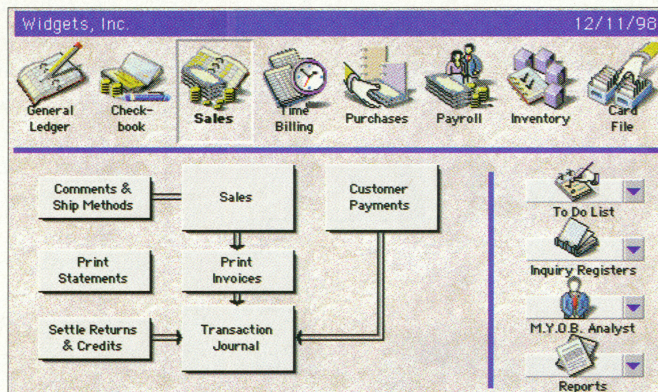
With regard to interface, there's virtually no difference between QuickBooks and QuickBooks Pro, but the latter has additional facilities for bids, invoices, and time-tracking. The beauty of the QuickBooks interface is that it's just as easy to use as the home finance-oriented Quicken. Buttons provide quick access to many QuickBooks features. And, just as with Quicken, QuickBooks uses the familiar checkbook model. What gives QuickBooks the upper hand in the interface arena is its "Easy Start-up" interview process. For each new company file that you create, QuickBooks guides you through a questionnaire about your business. These

questions help you to make the right accounting decisions for your specific business — an excellent asset for the accounting neophyte.

At first blush you may be taken aback by M.Y.O.B.'s flowchart-oriented format. But once you've spent a little time with the program, I guarantee that you'll warm up to it. M.Y.O.B. breaks your business into eight distinct sections: General Ledger, Checkbook, Sales, Time Billing, Purchases, Payroll, Inventory, and Card File (address book), all of which are easily accessed from a single window. No matter which section you're working in, a flowchart clearly displays how each transaction is linked. Also, like QuickBooks, the program provides an interview that guides you through the process of setting up your business.

The Aatrix Mac P&L interface is unique. When the program opens, you're met with a navigation bar that gives you at least three distinct ways to get at the same features, so you can choose whichever method best suits you. The navigation bar also provides excellent visual information about which file you're currently using, and prominently displays the Aatrix technical support number. But unlike the previously mentioned programs, you're going to need to have some knowledge about accounting before you'll be able to set up your first business account. Mac P&L provides no account wizards or automatic setup.

Like M.Y.O.B., Aatrix Accounting 3.0 breaks your business into eight distinct categories: Receivables, Payables, General Ledger, Payroll, Inventory, Analysis, Reports, and Administration. These categories are arranged as tabs at the bottom of your screen. Selecting one of the tabs brings up a small menu that allows you to select a specific item relating to that tab. Aatrix Accounting also provides an excellent setup assistant that

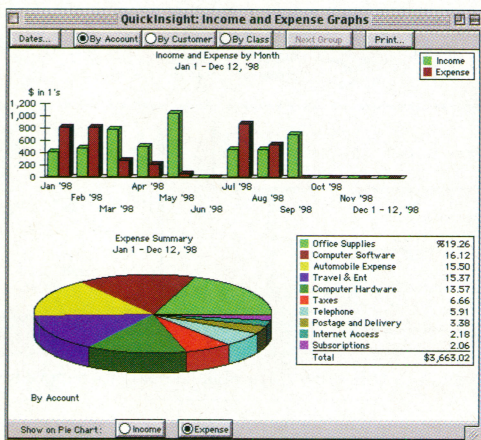


Best!Ware has updated M.Y.O.B.'s interface while keeping its simplicity.

guides you through the creation of your account. What's great about the assistant is that it doesn't abandon you once you've created your account. Aatrix Accounting includes an amazingly helpful feature called Smart Guide — an ever-present help screen that displays context-sensitive information as you navigate through each new section of the program.

If you like the way that Quicken is organized but you want a program that's far more robust, you should look at Big Business. The program's interface is easy to use. Toolbars change to match the section of the program you're using, and a navigation bar in the upper-left-hand portion of your screen lets you quickly switch from any section of the program to another. While it's not as detailed as QuickBooks, M.Y.O.B., or Aatrix Accounting, Big Business does provide decent guidance as you initially set up your business accounts.

NetBooks is by far the most rudimentary of the full-business accounting packages. A single navigation bar with six buttons for General Ledger, Accounts Receivable, Accounts Payable, Payroll, Inventory, and Job Costing gives you complete control over your financial universe. A simple click on any of the buttons immediately brings up windows for data entry. While setting up the program was relatively easy — NetBooks also uses an easy-to-follow setup assistant — using the program was a different story. Data entry is sometimes confusing; for example, entering the number seven without a decimal point didn't result in an expected "7.0" but instead



Both QuickBooks and QuickBooks Pro provide one-click access to information about your business.

in a “.00007.” Other than that, the program was simple to use.

Financials, Features, and Flaws

It's one thing to be easy to use, but if a program doesn't give you the answers you need when you need them, what good is it? To be of value, a business accounting program needs to answer all of your questions: Do we have the inventory to fill this order? Who owes us money? To whom do we owe money? Are we making money? These questions and many others are key to making your business work. So which program can provide you with the most information and still make it easy to keep your business running smoothly?

Quicken incorporates some of the best reporting tools available anywhere. Excellent graphs and detailed reports are Quicken standards that many users take for granted. And then there's QuickFill. Using Quicken, you only need to enter a transaction one time. The next time you begin to enter the same name, Quicken “remembers” what you typed before and fills in the rest.

But Quicken isn't designed to handle the details of business finance. It includes only very limited support for payroll; a smattering of business reports; no invoicing, inventory, auditing, or estimating — need I say more? In short, Quicken will work in a pinch, but if you plan on doing any real accounting work you'll want to upgrade to something more substantial.

QuickBooks has everything you love about Quicken in a package designed for businesses. You like graphs? QuickBooks's graphs will give you instant insight into every aspect of your business, from how much money you've spent to how much money your business is making. Need great reports? Ditto.

QuickBooks lets you look at nearly every aspect of your business from almost any perspective. Can't live without QuickFill? You got it. But QuickBooks also has the ability to print invoices and customer statements. If you need to maintain a payroll, QuickBooks can handle that as well. The beauty of the program is that it does everything so simply that it hardly feels like work.

QuickBooks's chief failing appears as soon as you need to deal with inventory, since it has only the most basic inventory-management capabilities; you can't group your products in any significant ways. If your business revolves around inventory, leave QuickBooks alone. Also, QuickBooks has one huge downside: it hasn't been updated since 1996, and Intuit has no updates planned for the Mac version. So while the Windows version trucks onward and upward, you'll be using the same program from now until, well, forever. Also, QuickBooks provides no means for networking. So if you expect more than one person at a time to be using the accounting program, this is not the package for you.

QuickBooks Pro has everything its smaller sibling has, with additional features. QuickBooks Pro allows you to create estimates and bids and roll those over into invoices when the sale comes through. And for you consultants in the

crowd, QuickBooks Pro also contains a time-tracking module. Unfortunately, as with QuickBooks, the same “buts” apply: No networking. No upgrades.

The Mac version of M.Y.O.B. no longer lags behind its Windows counterpart. In the new version, data files are compatible across platforms, but you can't work on the same file over the network with someone on a PC. However, the new version includes direct links to Microsoft Office 98, giving you far greater control over the minutiae of your business finance. If you don't own Office 98, M.Y.O.B. still includes nearly 100 reports and graphs to help you determine how your business is doing. From inventory to payroll, the answers are as close as the touch of a button. BestWare has also added a new time-billing feature that makes it simple to invoice your customers and track the time you've spent on a job. The program includes

built-in payroll capabilities, customizable forms, and more than 100 business templates, and it's networkable right out of the box. Downsides? No significant ones.

Mac P&L is a good accounting package, but it's not a great one. To its credit, the program provides support for assembling multiple inventory items into a single product. But while the program includes reports to help you determine the health of your business, these reporting features are sparse compared to any of the other programs we looked at. This translates

into more work for you if you're trying to get a grip on the ebb and flow of your business. And if you plan on having any employees, you'll need to purchase Aatrix Mac P&L Payroll (formerly Aatrix Ultimate Payroll). With the exception of Quicken Deluxe 98, every other program includes payroll capabilities in its basic package.

Aatrix Accounting is an excellent pro-



The tabs in Aatrix Mac P&L open detailed option screens.

WWW

machome.com

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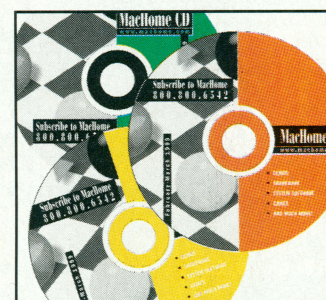
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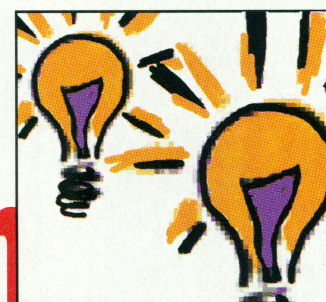
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gram. The user interface is nearly as easy to use as is M.Y.O.B.'s, and every feature is literally a mouse click away. This package includes payroll, inventory assembly options, and a bevy of reporting tools — including highly detailed information on inventory, sales, and expenses — and, unlike any of the other programs, Aatrix Accounting allows you to create completely customizable forms and reports.

Unfortunately, the form designer is not refined enough to make it tolerable for most users. Adding fields with text and graphics to your form is at best difficult and at worst downright painful. Another small downside to the program is the number of files (at least 50) that are created when you build each new company file. While that may not be a huge problem, it's not nearly as efficient as creating a single database file.


Big Business excels in the area of inventory and contact management,

and it has amazing cross-platform capabilities, including the ability to share the same data files over a network. Because it's built on a database foundation, it has excellent find and sort capabilities. From an accounting perspective, it contains everything you need except a true payroll module, which is unfortunate. It also has rather hefty system requirements: 50MB of disk space, 32MB of RAM, and a PowerPC. If you're running with anything less than the suggested physical RAM requirement or if you're using an older-model PowerPC, you may find yourself frustrated at the program's lack of responsiveness.

While NetBooks may appear last in the list, it's certainly not the least when it comes to features. NetBooks handles everything that the bigger, more well-known programs do. In this package you'll find a multiplicity of reports, from customer sales to accounts receiv-

able, though the program lacks graphing tools. NetBooks even includes support for multiuser security, and it can also open files from version 2.0 of Peachtree Accounting, the precursor to Aatrix Accounting, so it makes for an easy migration. One problem with NetBooks is that it's difficult to learn and, as I mentioned in the Interface section, data entry does not always work the way I expected it to. Yet if you're looking for an inexpensive package, this may well be it.

For My Money ...

QuickBooks has been at the top of the Mac small-business throne almost forever, but that's no longer the case. M.Y.O.B. far surpasses any of the other programs from virtually every perspective. Simplicity, a wide range of useful features, and sheer accounting power make M.Y.O.B. the only accounting package you'll ever need. 

Accounting Products

	Company	Price	Description	Rating
Aatrix Accounting 3.0	Aatrix Software 800-426-0854 www.aatrix.com	\$129	Powerful accounting package with support for payroll, inventory, and assemblies.	★★★★
Aatrix Mac P&L 6.2	Aatrix Software 800-426-0854 www.aatrix.com	\$159	Unique, easy-to-use interface. Simple, basic accounting package.	★★★
Big Business 2.5	Big Business 877-970-0022 www.bigsoftware.com	\$395	Good, well-rounded financial features. Excellent inventory management.	★★★★½
M.Y.O.B. 8.2	Best!Ware 973-586-2200 www.bestware.com	\$149	Integrates with Office 98. Over 100 business templates. Networkable right out of the box. Inventory, assemblies, time billing. Generous documentation.	★★★★★
NetBooks 3.1.6	Symmetry Software 602-596-1500 www.scottsdale.com	\$80	A shareware program with everything from inventory management to payroll.	★★★
QuickBooks 4.0	Intuit 800-446-8848 www.intuit.com	\$110	Uses initial interview process. Eighty business reports, payroll, and inventory; some contact management.	★★★
QuickBooks Pro4.0	Intuit 800-446-8848 www.intuit.com	\$199	All of QuickBooks' features plus 90 business reports, advanced job costing/budgeting, estimates, and time tracking.	★★★★½
Quicken Deluxe 98	Intuit 800-446-8848 www.intuit.com	\$40	Basic business accounting. Ten business reports, some for accounts payable/receivable.	★★★½*

*When rated as a business (as opposed to personal) finance package

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Night of the Living Mac



Old Macs Walk Among Us. **Do Not Fear Them.**

A thoroughly modern Mac — a shiny new G3-based model, for example — is a thing of joy and beauty. But why should your earlier Macs sit moldering and forlorn in the closet like so many velveteen rabbits, when you can still do useful things with them? Why?

By John Poultney

See, if you've been using Macs for a while, you might just have an older 68K system or two, say an SE, a IIcx, maybe a Quadra 610, just gathering dust. That's sad, and it hurts, but it's often the case with computers. They become outdated pretty quickly, and they depreciate faster than anything on earth, so in many cases, selling them won't get you much lucre. But Macs are special among computers, because unlike

most old PCs, these old systems retain their usefulness and can still do many cool tasks. Many of them, even if they're 10 or 12 years old, can run modern applications and system software. Maybe not System 8, but certainly most versions of System 7. And that's a lot of applications, friend.

Living in the Past

There's an awfully big temptation among

early Mac owners to upgrade their computers, adding faster processors in place of the originals, the same way the proud owner of a vintage 1972 AMC Gremlins might retrofit that model to accept a V-8 engine.

But that's not always a good idea with old Macs. Oh sure, it's possible. *Lots* of things are possible, but that's a story for another time. You can get a little extra mileage out of some Mac II and Quadra

systems by using a PowerPC upgrade card, if you can find one, and you can boost the processors in other Macs (from a 68030 to a 68040, for example). It's great fun, and certainly compelling for the tinkerers in our midst, but there comes a point of diminishing returns, especially when you're dealing with systems based on early 68K chips (see sidebar, "What's 68K, Again?"). Remember, modern machines work great because system components are matched to keep up with the faster chips.

"Old 68K machines work great, provided you *leave them in the past*," said *Boston Globe* computer columnist Simson Garfinkle, warning emphatically that users shouldn't try to use system software beyond what the machine was originally designed for.

So we take the bold step of saying *don't upgrade*. Save your money for one of those cool new Macs. If you must upgrade, we recommend just the basics: more RAM, a larger hard drive, and *maybe* a processor upgrade. But don't get caught up in the hype. An old Mac needn't be souped up beyond recognition to get something useful. Walk with us now as we present to you a few things to do with your old Macs, with your head held high, even.

CD-Maker

Adaptec's Toast software lets you create CD-ROMs and audio CDs with drag-and-drop simplicity. It'll work on Macs based on 68030 or later chips, which includes most of the venerable Mac II line, as well as the widespread Quadra, Centris, and Performa models. But the older the Mac, the slower the performance of the SCSI port, which is where you hook up the external CD-recordable drive (you can pick up one of these for less than \$220, usually including Toast; check PriceWatch, at www.pricewatch.com, for good deals).



So if you get a drive that supports 4X CD writing, don't count on using the fastest speed with an old Mac. I tried it with a IIci and could only successfully write in 2X mode. Earlier models might only muster 1X writing. Once you move up into later models, such as the Quadras, you can probably get away with the 4X mode. But check first by running Toast in simulation mode.

"I'd go with a IIci or above for CD burning," said Toast engineer Elias Kesh. "The earlier models just don't keep up; in fact I'd avoid earlier models of the II family." He said it might be possible to burn CDs with an SE/30, if you keep the drive speed down. PowerBooks, early or modern, are not recommended for use with Toast.

Because burning CDs ties up your Mac for the duration of the burn (usually 20 to 30 minutes at a time), it makes sense to set an older one aside and configure it specifically for this purpose. Adaptec, www.adaptec.com

Fax Me Your Pager Number

You just can't go wrong with a second phone line these days. If you have a small business, why not make it all the more legit with a dedicated fax line? You can also use the fax line for Internet access while you're on the phone.

STF Technologies' \$79 FaxSTF 5.0 software runs on '040 Macs, but the \$69

version 3.2.5 works with earlier systems. So with just a small investment in a fax modem, you can set up a workstation specifically for sending and receiving faxes. You can also do this with older Global Village modems and the Global Fax software; these were bundled with many a Performa back in their day. Another possibility is Smith Micro's MacComCenter (now at 3.1, for \$99), a versatile fax program that is bundled with some modems.

By the way, you don't need a fast modem to do faxing, because most fax

machines only work at 9,600 bps. Also, the serial ports on early Macs are equally poky. These days, 9,600 bps modems and even their speedier 14.4 Kbps brethren usually go for less than \$20 at thrift stores or used-computer shops.

Just outfit your system with a simple word processor and you'll be good to go. Remember, your documents will have to be in electronic form for faxing, unless you want to get a scanner as well. STF Technologies, www.stfinc.com
Smith Micro, www.smithmicro.com

Are You Being Served?

The purpose of a server is merely to store data and send it out on request, either over a network or over the Internet. So a dedicated computer fills the bill handily, and a 68030-vintage machine can run most of the software you need to pull this off. An SE/30 with a large hard drive is a good choice here, since it's small and integrated with a monitor.

• **File server.** With a network, a central computer becomes the repository for files accessed by a group, a setup you might have for a small business. If speed is not an issue, you can connect with PhoneNet cables, available at very low cost from Farallon, for a general-purpose LocalTalk network server. If you're working with large files, such as Photoshop images, you might want to look into a speedier Ethernet network. Most modern Macs, including the iMac, have built-in Ethernet, but if your model doesn't, chances are you can find a card that will give it that capability. Most Macs from the SE forward have an expansion slot that will work for this purpose, and you can get Ethernet cards — usually for less than \$75 — from online stores or used-computer shops. You'll also need to tweak the File Sharing, Users & Groups, and AppleShare control panels accordingly. Farallon, www.farallon.com

• **Web server.** You don't have to use a dedicated Windows NT or Unix machine to serve Web files over the Internet. A 68030-or-better Mac can do the trick, provided you have a dedicated

What's 68K, Again?

For the first 10 years of the Mac, the systems were based on chips from the Motorola 68000 series, which included the 68000, 68020, 68030, and 68040 processors. Macs with these chips — and there are millions still in use — are known as 680x0 or 68K systems. Check your computer's owner's manual to see which chip your Mac uses.

680x0 processors worked with a language, or instruction set, called complex instruction set computing (CISC). This language breaks tasks into smaller ones; applied to opening a garage door, it might say to grab the garage door opener, point it at the door, and then press the button — three distinct steps.

In 1994, Apple began producing computers using PowerPC chips, which use the reduced instruction set computing (RISC) approach. New Macs use only these chips. RISC seeks to minimize the number of tasks a processor does for each job by combining smaller tasks into one instruction that the chip understands. A RISC approach to the previous example might be simply, "Open the garage door," a significant reduction of steps.

Replacing three instructions with one would obviously give you a speed boost, but it also requires application software to be rewritten, or optimized, for RISC. Fortunately, the PowerPC can play make-believe and emulate a 68K chip when it needs to run nonoptimized software. And some "Fat" applications will run on either processor. But some software is written specifically for the PowerPC and will not run on older processors. *MacHome* notes this when reviewing software; that's why you'll see "PowerPC required" in some reviews.



Face the Music

Lots of older MIDI programs and hardware interfaces work great with old Macs, and such setups are ideal for basic music sequencing and educational scenarios (older Macs can do good music notation with a decent printer).

MIDI (Musical Instrument Digital Interface) has a long history on the Mac, and quite a few good shareware MIDI sequencers have been written over the years. Many are available on the Web; try the Shareware Music Machine site for a few good ones. Some require PowerPCs but many work with 68K machines.

MIDI programs go pretty easy on the Mac's processor, so don't think you have to get an extremely modern system to learn about sequencing. You can do more with a modern Mac, but lots of musicians and teachers all over tarnation still use old Mac Pluses for sequencing.

If you can find old versions, check out MIDI software such as Performer by Mark of the Unicorn, Vision by Opcode, or Trax by Passport Systems (Passport's not around anymore, but you can still find its software in some music stores). Some modern packages by these companies, such as Opcode's EZ Vision and MusicShop, and Mark of the Unicorn's FreeStyle, are also good choices. A general-purpose MIDI interface (used to connect the computer to a keyboard) goes for around \$60 these days, and a keyboard and MIDI module can be had for a coupla hundred samolians.

It makes sense to set up a separate Mac just for MIDI because you'll need to install certain system extensions, such as OMS or FreeMIDI, that don't always get along well with everything else. Also, you'll need to sacrifice at least one serial port. Once everything's set up correctly, though, it's time for smooth music. *Shareware Music Machines*, www.hitsquad.com/smm/mac *Opcode*, www.opcode.com *Mark of the Unicorn*, www.motu.com

You've Got Voice Mail

68K Macs can act as pretty impressive telephony devices, if you hook 'em to

phone line and a registered domain name (a domain name costs \$70 for two years from Internic). The server software, Quid Pro Quo, is free from Social Engineering. You'll also need a permanent ISP connection; some wheeling and/or dealing might be needed to get the best monthly rate. For modest use, you can run a Website adequately with a 28.8 Kbps or 33.6 Kbps modem.

Internic, [http://rs.internic.net/](http://rs.internic.net/cgi-bin/domain)

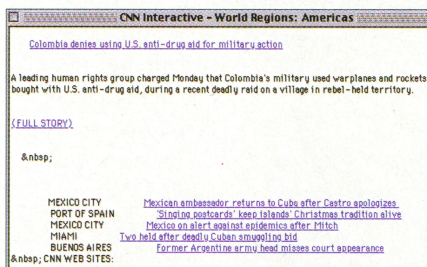
cg-bin/domain

Social Engineering, www.socialeng.com

Surf the Web, Text Style

If you just want to access the Web for information, not pictures, you can do that very thing handily on an old Mac. You don't need the latest Java-crunchin', JPEG-previewin' browser, and it wouldn't run on an old system anyway. Instead, try MacWWW, MacWeb or MacLynx for text-based browsing. You

might just like it. At first it's a little unnerving, if you're used to seeing all those graphics, but if you just need to check the headlines or download some text files, these programs should do you just fine, even with a low-speed modem.



Ugly but useful: the text-only Web.

MacWWW and MacWeb, www2.prestel.co.uk/macman/classicmac/apps.html *MacLynx*, www.lirmm.fr/~gutkneco/maclynx/

what's called a voice-capable modem (one that transmits voice as well as data). STF Technologies' VOICEstf (née Front Office) package lets you set up 10 separate voice mail accounts, which is handy for those of us with growing families or businesses. STF plans to release a souped-up version, also 68K-friendly, early this year. Called Ring Manager, it'll cost about \$119.

Big Island's \$119 YoYo is a strangely named device that does all kinds of crazy telephony things, including displaying Caller ID and customizing the sound of your phone's ring depending on who's calling. It can also notify you when you have voice mail, either through e-mail, faxes, or pages. *STF Technologies, www.stfinc.com
Big Island, www.big-island.com*

Clapper Begone!

We ask you: Why get up *at all*, when you can hook up your appliances, lights, and stereo to the old Mac? Now you can enjoy the mad-scientist experience in the privacy of your own home. MouseHouse Electronics offers the \$130 MouseHouse starter kit, with everything you need to get started in the people-pleasing world of home-automation.

If you're *really* cool, you might want to check out BeeHive Technologies' \$199 ADB I/O, a switch-filled external box you can hook up to all kinds of appliances and electronic devices. Equipped with a rudimentary software interface, this bad boy can do everything from turning the lights on and off to controlling the laboratory down in the basement.

*MouseHouse Electronics,
www.mousehouse.net
BeeHive Technologies, www.bzzzzzz.com*

Label-Maker

What made the BatCave so *cool*? Simple — everything was labeled, as in "BatComputer." Now you can label everything in your house using nothing but an old Mac, an old printer, and some Avery labels. Oh, and some label-making templates from Avery, though you have to fill out an annoying online form before you can download them. Getting the labels aligned correctly

might make you feel that you're being punished by God, but once you get them set you'll be a labeling fiend.

*Avery templates,
www.avery.com/software/index.html*

Get Hyperactive With HyperCard

Apple's venerable HyperCard software can do all sorts of record-keeping things with older Macs, such as keeping track of hours, recipes, CDs, what have you. Librarians use it to keep tabs of books; school lab managers use it to record student hours. Apple uses it to keep track of visitors to its headquarters, and to print "Hello, My Name Is ____" labels.

These tasks are accomplished with "stacks," which are HyperCard programs. There are lots of stacks online; try a search on "hypercard stacks" using your, uh, browser of choice.

Are You Receiving Me?

Every neighborhood should have an eccentric character with a ham radio setup in the garage, and now *you* can be that eccentric. Software from Black Cat Systems lets you integrate ham radio equipment with your 68K Mac, to control your shortwave set, read Morse code, or even to design a new giant antenna that towers menacingly above your neighbor's carport.

*Black Cat Systems,
www.blackcatsystems.com*

Get Published

You can create basic newsletters and fanatic-type publications to hand out on street corners with an old Mac (68020 or newer), a printer, and Staz Software's bodacious \$30 Redneck Publisher. Kinda like QuarkXPress for the "Dukes of Hazzard" set.

Staz Software, www.stazsoftware.com

Give It Away, Give It Away Now

Many schools, job training programs, and community centers would be ecstatic to take working Macs off your hands. Ask if your local Mac user group can help coordinate donations, or call high schools and ask for the "technology coordinator." You might score a tasty tax donation in addition to that warm, glowing feeling. Now *that's* good eatin'!

The Obligatory "Other" Category and Contractual Disclaimer

Sigh. Someone always brings up the "Macquarium" idea whenever the topic of old Macs is bandied about. Yes, you can do this if you must, but please only do so if the Mac in question is beyond hope of repair. Our point here is that these systems are still useful as computers, and if you do something like this, however amusing it might be, your Mac will no longer be a computer. It will be a *freak*.

Other projects you might try include boat anchors, footrests (I'm using a Ilci for one now), table lamps, and bug zappers. *Do not attempt to modify the electrical innards of any computer, however, unless you know what you're doing.* You can get seriously shocked, killed even, especially if you're working on a model with an integrated monitor.

MacHome would welcome videos involving the demise of *nonworking* Macs for possible inclusion on our Website. In particular, we'd like to see systems dropped from a great height or crushed with an 80-ton press. But again, take safety precautions. **MII**

Online Resources

Resources for Older Computers
www.coyotecom.com/database/old.html

Classic Mac Users Page
www2.prestel.co.uk/macman/classicmac/home.html

Low-End Mac
www.mactimes.com/lowend

"Macquarium" instructions
www.jbic.com/~ben/macquarium/instructions/MacQuarium/page4.html

PriceWatch
(tracks street prices for peripherals)
www.pricewatch.com

PARTS AND SYSTEMS SUPPLIERS

Awhen
www.awhen.com

Pre-Owned Electronics
www.preowned.com

Sun Remarketing
www.sunrem.com

Shreve Systems
www.shrevesystems.com

No Worries!

The Ins and Outs of Computer Insurance

Now that you're working at home and you've started your own business, you probably have a consistent plan for backing up your valuable data. Right? Good. Now, I don't want to alarm you, but how would your business fare if something disastrous — knock on wood — were somehow to happen to your backups as well, or to your beloved hardware?

If your livelihood depends on your home-office equipment, you might want to look into getting it insured.

Are You Already Covered?

Before we plunge into the various options for insuring your Mac and its attendant home-office necessities, let's start with what you already have. If you have homeowner's insurance, take a good, close look at your policy and contact your insurance agent. Your homeowner's policy might cover your home-office equipment, but is there a limit on how much is covered? Of course there is. And if this limit is, say, \$2,500, and your business is run on two iMacs, a SuperDisk drive, an external hard drive, a scanner, and a printer, not to mention all the software, then your existing homeowner's insurance may not be sufficient.

However, many companies that offer such policies allow you to purchase an "endorsement," which extends the coverage limit to a figure more closely linked to your assets. Such scrutiny of your existing policy can be a real eye-opener; some homeowner's policies have special exclusions disallowing any claims made with regard to business equipment.

If you had this kind of homeowner's policy and you had just taken the plunge into freelance Web design, and then a fire gobbled up your home, you might be able to get paid for everything *except* a replacement for your system. For many such policies, however, it's possible to purchase a "rider" that extends coverage to include business equipment.

Better Shop Around

After checking out what your existing policy can do for you — whether in its current form or with additional services — take a look at what's offered in your state in the way of computer insurance. As with any kind of insurance, it's a good idea to shop around in order to get the best deal.

A good place to start, aside from asking your friends and neighbors and flipping through the yellow pages, is with

your state insurance office. Many of them have Websites, and many offer detailed, annotated listings of insurance companies and brokers. If you like what one insurer offers but you've never heard of it, check with the Better Business Bureau and see if there have been any complaints about the company.

The Computer Insurance Game

Check to see whether the policy you're interested in covers only "named perils," or whether it's an "all risks" policy. If it's the former, the calamity must fall neatly into one of the pre-existing peril categories. And if it doesn't, you can bet the farm that should something happen to your beloved Mac, you'll have a hard time collecting your money. If it's an all risks policy, then as long as the incident is bad enough to keep you from getting your work done, chances are you'll get reimbursed for the damage.

Something else to consider is whether the insurance company will cover your equipment for replacement cost or cash value. Replacement cost is a much better deal, because the cash value of your equipment depreciates very rapidly. And I'm sure I don't have to remind you how woefully true this is with regard to



computers. My Power Mac 6100/66 is worth, what? Fifty bucks? But if an insurance company were to pay me for a replacement, well, Apple doesn't make 6100s anymore, so the insurance would pay for the computer that comes closest in cost, which would be an iMac.

All insurance policies have exclusions — situations that are not covered, so check to see what the exclusions are. My policy, for example, doesn't cover any equipment I leave in an unattended vehicle. But I figure I can live with that level of risk.

PowerBooks are a special case. They're eminently stealable, slipperishly losable, and oh so very expensive. And because they're portable, they're easy to drop. If you have a PowerBook, make sure it's going to be covered, and make sure it's going to be covered even if you leave the house with it. A policy that covers such an item, even as it floats from place to place, is called a "floater." But here's a tip if you ever find yourself in the cushy position of being able to travel with a PowerBook: Get yourself a removable Zip or SuperDisk drive. Then you can back up your data wherever you go, and pop the disk into your pocket or purse.

For covering \$8,000's worth of computer equipment, Safeware has a policy that costs around \$89 a year, and you'll have to pay a \$50 deductible should you experience a loss. The policy covers most kinds of damage to your equipment or theft, excluding earthquakes or theft from an unattended vehicle. Safeware also covers your PowerBook, no matter where you carry it. For a \$200 premium and a \$200 deductible, Safeware covers up to \$10,000's worth of equipment; coverage includes earthquake damage and theft from unattended vehicles.

Another company, The Computer Insurance Agency, has a similar policy with similar prices. Both companies cover the cost of purchased software, but

not the cost of replacing lost data, such as your valuable client list or screenplay. Both companies will pay for the replacement value of your Macs, rather than their current cash value. But as with any insurance policy, the actual prices and terms vary depending on your individual situation, so give each one a call to learn about the specifics.

A company called Data Security Insurance offers similar policies at slightly higher prices, but it covers the cost of lost data as well.

In the computer-insurance game, just as with freelancing or working for yourself, nothing is more important than keeping your receipts. If you lost the receipt for your 333MHz G3 tower, then in the eyes

of just about any insurance company you talk to, you don't have a 333MHz G3 tower. This goes for software and anything else computer related, such as (those ever-expensive) cables, RAM chips, Zip disks, inkjet cartridges, photo paper, and so on. And remember: If there's a fire, a flood, or any other of Nature's extravagant inconveniences, then all your receipts have gone the way of your equipment. So keep copies of your receipts in a safe place, such as a fireproof box or safe-deposit box.

Business Insurance

Because of the recent rise in the number of people working out of their homes (nope, you're not alone), insurance companies have developed special policies just for home offices. These policies are referred to by such monikers as "in-home business policies" or "homework policies." And in general these policies will cover not only your

Your homeowner's policy might cover your home-office equipment, but is there a limit on how much is covered? Of course there is.

Insurance Terms

All risks: Coverage that includes any and every kind of damage to particular items.

BOP: Business owner's package. These cover a wide range of business losses, but some businesses, such as restaurants or manufacturing operations, usually don't qualify.

Broker: A professional who works with insurance companies to determine the terms of your policy.

Claim: The formal statement to your insurance company that you've had a loss.

CPP: Commercial package policy for those who don't qualify for a BOP. These generally cost more than BOPs.

Deductible: The amount that you have to pay in addition to your usual premium when you make a claim.

EDP: Electronic data policy. As the name implies, it's a policy that specifically covers your data.

Endorsement: An extension in the amount of coverage.

Exclusion: Specific items or conditions that are not covered.

Floater: A kind of policy that covers an item regardless of where it is in the world.

Named peril: Coverage that includes specific (named) kinds of damage to particular items.

Policy: The agreement between you and the insurance company that specifies coverage.

Premium: Your price for coverage.

Rider: Similar to an endorsement, a rider extends your policy for specific conditions.

Computer Insurance Companies

Safeware
800-848-3469, www.safeware-ins.com

The Computer Insurance Agency
800-722-0385, www.computer-ins.com

Data Security Insurance
800-822-0901, www.datasecurity.com

The United Parcel Service (Not)

The uninterruptible power supply (UPS) has primarily been a boon to large corporations, but new home-sized versions provide a little extra assurance to the home-office worker. One company, American Power Conversion (APC), offers an extensive range of UPSs, some of which protect fax modems, sound an alarm if the power becomes unstable in the building, and keep the electricity flowing for a while in the event of a blackout. Prices range from \$60 to \$600, depending on the size of your system and how much intelligence you require — some can actually page you to let you know that there's been a power failure, that the UPS has saved and quit all your applications, and that your equipment has been shut down for you. 800-800-4272, www.apcc.com

computers and related peripherals, but also your other equipment, such as fax machines or postage meters. They will also cover a range of other

insuring your network. Companies such as Cisco and IBM provide risk assessment services, paid for, understandably enough, by the insurance companies. Such policies will insure you against hackers and cover any lost or corrupted

data that might result from such a hack. They were inspired, probably, by hacks into such establishments as the New York Times Website and the Department of Defense.

Don't Forget the Basics

Regardless of which kind of insurance you choose, it's important to think of it as your last safety net. After all, depending on your insurance company, it can take a long time to make a claim and receive payment for it.

Insurance Resources

Insurance News Network

A comprehensive Website that offers news, features, and advice regarding many insurance topics. www.insure.com

Insurance Information Institute

A nonprofit (and therefore nonpartisan) organization with a cornucopia of helpful information about insurance, delivered in straightforward, conversational language. www.iii.org

National Insurance Consumer Helpline

Call Monday through Friday, 8 A.M. to 8 P.M. eastern standard time, and they'll help you with your insurance-related questions or refer you to resources within your state. 800-942-4242

general problems that might beset a home-based business.

And then for slightly larger businesses, there is a kind of policy called a "business owner's package," or BOP, and this is more comprehensive and more expensive than the in-home business policies. These policies would only interest you to the extent that you hope to someday grow out of the one office in your home. There is also an option called an "electronic data policy," or EDP, which covers not only mechanical failure, such as fried hard drives, but also viruses and time spent recovering lost data.

If your business gets really big, you might want to look into

Keep in mind that every day your computer is down can cost you hundreds of dollars. We've said it before, and I'll say it again here. Get a simple, reliable backup routine worked out and stick to it with devoted fervor — because your data is often much more valuable than your hardware. Monthly, mail a backup to an offsite data storage facility, use an Internet backup service, or simply mail a Zip or Jaz disk to a friend out of state (use two, rotating them, so you don't have to buy a new one each month). Use a surge protector so that an unexpected burst of electricity won't fry your Mac; better yet, invest in an uninterruptible power supply (UPS), which, in the event of a power failure, will still give you a little time to save, quit, and shut down.

Rolling With the Punches

With a small, wise investment, it's possible to purchase the kind of insurance that will keep you free of the Big Worries. If disaster were to threaten your home office, you'd be put out, sure; but if you were covered you'd still be able to bounce back into action without having to start at rock bottom. **III**



PowerBook® G3 Series accessories from VST.

VST offers a wide variety of products for the Macintosh PowerBook G3 Series. You can have the convenience of the Zip®100 -- the flexibility of the SuperDisk™ Drive -- the high capacity storage space of the Hard Drive -- smart-charging from our 2 slot G3 Charger and the portable power of our Auto Adapters, AC Adapters and Batteries. VST has the solutions you are looking for.

Visit our web site for our entire product line at www.vsttech.com

VST Products are available at www.vsttech.com and through major distributors, resellers and catalog mail houses.

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"It's surprising how many features VideoShop includes. Web and interactive developers who need an editing package with neat bells and whistles will find VideoShop a compelling choice." -**MacWeek**

"If ever there were a killer DTV program at a killer price, VideoShop has got to be it." -**Camcorder and Computer Video**

"...simplicity, functionality and overall elegance make Strata VideoShop a strong contender against any other desktop nonlinear application on the market today." - **Videomaker**

STRATA™
VIDEOShop



Strata VideoShop™ 4.5 is the perfect tool for capturing, creating, editing and outputting video for the **world wide web**. With VideoShop's easy to use interface you will adding Quicktime™ action to your website in no time.

Now that VideoShop supports of **Firewire™** you can gain the aDVantage easier than ever before. **Transfer video** data into your Mac as a pure digital signal without going through the usual analog to digital conversion. That means you can add movies to your website in no time. And the best part is that **anyone can do it!**

Quicktime™ 3.0 is fully supported in this release of VideoShop. You can now create both high quality **streaming audio and video** for the internet. Enhance movies and still pictures with **accelerated filters** for sharpening, color tinting, embossing and more. And through working with more than **thirty different file formats**, VideoShop becomes the leader in midrange video editing software.

But we've also included features that you can't get in any other video editor like the ability to import, place video on, and animate **ACTUAL 3D objects**. And you can automatically edit professional quality music to a specific time with the **TuneBuilder™** plug-in. Add in easy custom transitions and filters, multiple language support in one project, **Morph, Warp, and Chromakey** functions, and you have VideoShop.

You can easily create amazing video footage for the **web, CD-ROM, or tape**, right from your desktop. Get an aDVantage with VideoShop 4.5 today!

To order: Call 1-800-STRATA3D or visit our website at www.strata3d.com.

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Take It Away, Uncle Sam!

MacInTax vs. Kiplinger Tax Cut

Yes, it's that time again. Funny how time flies when you're putting off some onerous task, such as doing your taxes. Of course, for those of us who expect a refund, it's not that unpleasant a task, but it still takes some hard work; tax-preparation programs smooth out many of the rough edges.

The two most popular tax-preparation tools are Intuit's MacInTax and Block Financial's Kiplinger Tax Cut; they're actually very similar. They present you with a series of questions to gather your tax data, and dutifully perform all the necessary calculations, print the necessary forms, and, in the versions I tested, allow you to file electronically. They have counters at the top of the screen showing how much you owe or how much Uncle Sam owes you. They can also check for mistakes in your return and guide you through the process of fixing them. And they can warn you if any information in your return is likely to raise a red flag with the IRS, in which case they'll tell you the conditions that you need to meet in order to remain within the law. Unfortunately, both of these also require you to purchase a separate program for state taxes.

MacIn' Taxman

MacInTax comes in several editions, depending on your needs — a regular edition for \$35, a deluxe edition for \$50, a home and business edition for \$70, and a business edition for \$90. The deluxe version has movies and provides

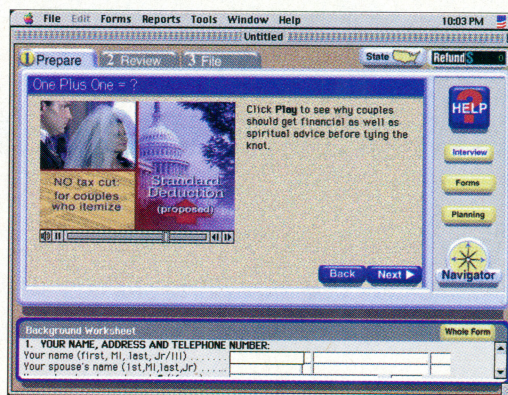
you with the ability to file electronically. If you're expecting a return (lucky you), then this alone might be worth the extra \$15, because if you file electronically you can shave weeks off the time it takes the IRS to cut you a check. This was the edition that I tested out. The business editions contain additional tools for analyzing and projecting business needs, as well as all of the additional forms the IRS requires for businesses.

The main screen is well laid out and easy to use. It begins with a movie that gives you an introduction to how to get around. But it's fairly easy to see what you need to do. Along the top are seven file-folder tabs with which you can jump to the topics Start, Import, Interview, Review, State, File & Print, and Planning. Along the right is a list of frequently asked

questions that relate specifically to whichever screen you're using. Along the left side is a tab that expands whenever your cursor floats over it, showing a map of the entire tax interview process, with topics checked off indicating your progress. This worked quite well, and I found it very useful, except that it doesn't work correctly in all screen resolutions. When I had my monitor set to 640 x 480, it worked fine, but when I had it set to 800 x 600, the map was half popped out all the time.

The language of the interview is conversational and pleasant, which made the experience of doing my taxes much more palatable than it usually is. On one

of the opening screens, the prompt is simply "Tell us about yourself." The interview is peppered with helpful tidbits, such as the useful fact that *this very piece of software is*



Kiplinger TaxCut has a lean and clean interface.

tax deductible. This is a nice bit of info to put up front, and it increases whatever warm fuzzies you might already have for the program. Also, in one of the many movies that cover the new 1998 tax laws, they offered some very helpful information about the home office deduction, which, as editor of the Home

Office section here at *MacHome*, I found very heartening. About how the 1999 laws affect the home office deduction, MacInTax has this to say: "Your home need not be the place where you generate most of your business income. It's sufficient that you regularly use it for such activities as keeping your books, scheduling appointments, doing research, and ordering supplies."

In general, I found MacInTax to be a pleasant guide through the arduous terrain of tax preparation. It "auto-formats" much of your data, so that telephone and social security numbers are consistently treated, and it prompts you to save every now and then, which is a good touch. It is, however, very slow on old machines. On an iMac it's fairly zippy, but on my 6100 it was sluggish, giving me the occasional Mac clock when moving from screen to screen. And it has a minor bug or two; the Search button mysteriously disappears under certain conditions.

Chop Chop

Kiplinger TaxCut also comes in different editions — the deluxe multimedia version and the business version. Block also offers a basic version, but that's only for Windows. Just as with MacInTax, the deluxe version has movies and the ability to file returns electronically.

TaxCut has a cleaner screen than MacInTax, if only because it only has three tabs across the top: Prepare, Review, and File. Like MacInTax, TaxCut has a map that shows all of the topics in the interview, with check marks beside the ones you've completed, but I found it less easy to use. The MacInTax map is slick — you can just move the cursor over to the left to peek at your progress. In TaxCut, you click on a button called Navigator; then you're asked to choose a topic from a dialog box, or click Cancel if you merely want to glance at how much more of the interview you have to get through before you can go out for beers.

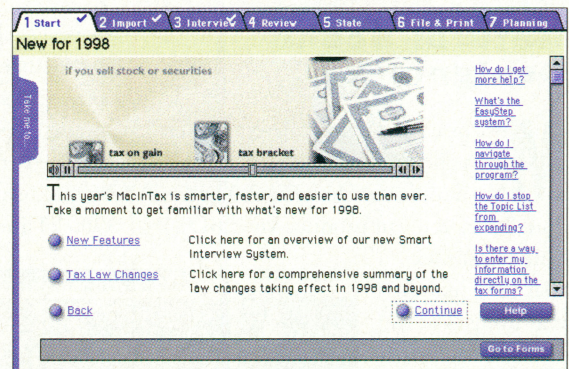
TaxCut gives you two options for proceeding through the interview — the regular approach, and the "fast-lane" approach, which is for those experienced in the art of preparing software-based tax returns. This is a thoughtful

addition, since it's designed to spare you from unnecessarily painful routines, but I don't think I'd feel comfortable taking the fast-lane approach to tax-preparation. Sure, I'd like it to be as quick as possible, but I'd also like it to be thorough. Put another way, the presence of a fast-lane approach made me feel as if the regular way was the slow lane. I preferred MacInTax's "one-road" approach.

I also felt the navigation to be a bit rough. That is, in any software, you should never have to think about "navigation." You should just be able to go where you need to go and do what you need to do. On many interview screens in TaxCut, it asks you a question and you have to click the Begin button, rather than the Next button, which is also available. So I had to stop and ask myself which button I should press, and I even wondered whether I'd pressed the right button two or three screens back. In MacInTax there's always one clear thing to do.

The hallmark of Kiplinger TaxCut is the tax advice provided by the editors of *Kiplinger* magazine. And this information, stored in a scrolling window brought up by the Help button, is voluminous, covering a wide range of topics. But I didn't like the fact that you had to click on the Help button in order to call up this information; I preferred the context-sensitive, conversational advice that peppers the interview in MacInTax. Also, I became restless with the way in which TaxCut conducted the interview. TaxCut would often preface a question with a statement such as, "Now we are going to ask you a series of questions about X." My insides would scream, "So ask me already and let's move on!" MacInTax would just cut to the chase and ask the question: "Do you have any dependents?" No. Boom.

There are many more movies in TaxCut than there are in MacInTax, but I also found the movies to be generally unhelpful, and I realized that if I was going to get through the return relatively



MacInTax provides context-sensitive FAQs.

quickly, I should skip the movies. One of them dwelled on the importance of entering accurate information.

To its credit, TaxCut is not quite as slow as MacInTax when it pages from screen to screen.

The Final Decision Both programs will make tax preparation a much more enjoyable experience, and both programs will also give you a good, hearty education in the process. But putting the two side by side, I found MacInTax to be much more helpful, despite its sluggish engine and its other flaws. In MacInTax, navigation is easier and more intuitive, I got a lot of use out of the progress map, and I found the script and the frequently asked questions to be well written, showing a good understanding of the needs of the average person. **MII**

rating

MacInTax Deluxe

\$35, Intuit
800-446-8848
www.intuit.com

Context-sensitive FAQs, nice conversational language, smart formatting, highly informative movies, saves your file often

Slow, not designed for all screen resolutions, search button disappears on occasion

rating

Kiplinger TaxCut Deluxe Multimedia

\$40, Block Financial Corporation
800-656-5426
www.taxcut.com

Thorough, comprehensive

Movies not that informative, does not save your work until the end, somewhat confusing navigational elements, unengaging script

Natural Scene Designer 2.0

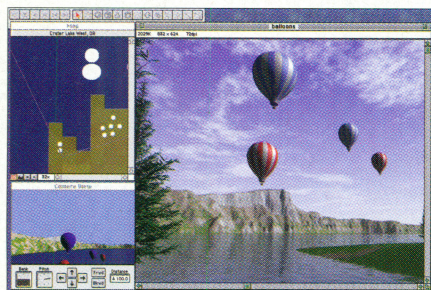
Most of us don't associate computers with the great outdoors. But with Natural Scene Designer 2.0 and your Mac, you can produce vivid 3D outdoor scenes that look like the real thing. Use your creations in multimedia projects, Web pages, and ads.

The interface consists of a toolbar and two windows: an overhead topographical map, and a head-on camera view in simplified natural colors. You can manipulate the perspective and place objects in either window.

It's easy to create new landscapes, or you can import U.S. Geological Survey models; an included CD-ROM also provides a library of additional images. Plop in your own 3D objects or use basic

shapes, such as cones and spheres, from the toolbar. Then generate some lifelike trees, rocks, and bushes with a few mouse clicks. When your scene is complete, render it as a photographic image, a shaded relief, or an animated QuickTime movie. You can also create QuickTime VR panoramas.

There are some drawbacks, however. Sometimes it's hard to tell how the two views relate to each other, and it can be tough to see from the working windows how objects fit into the finished landscape. You can undo only one action — and only certain actions, such as a view change or an object insertion. And sometimes it's difficult to grab an object's frame to manipulate it. But the finished results are stunning: Light is convincing, clouds and terrain look real, and objects create accurate shadows and reflections.



Natural Scene Designer comes on a floppy disk and uses a dongle (a cable "key") that plugs into an ADB port, so it won't work with iMacs. Natural Graphics plans to accommodate iMacs soon, but check before you buy. Also, you'll want more than the required 16MB of RAM to run the program at a reasonable speed.

The Final Decision Natural Scene Designer 2.0 is a fun, simple program that does a lot with a little. So go ahead, make a scene — and experience outdoor beauty from the comfortable indoors.

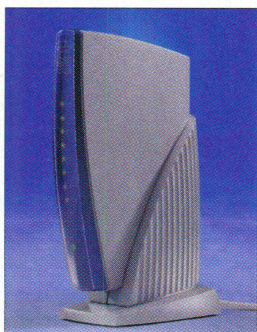
— Ellen Rush

Viking Components 56K External Modem

To my way of thinking, having 24-hour, toll-free technical support that can't do anything for you makes about as much sense as a two-story outhouse. Often it's some nagging detail that hangs you up, and it's only human to reach out.

Viking's 56K external modem *looks* good, and it worked OK, connecting at 44 Kbps, 46 Kbps, and even above its rated speed at 57 Kbps. However, I couldn't turn the speaker off using the Modem control panel (OS 7.6), and if there's an uglier, more strident sound on this earth than the Viking modem connecting, I have yet to hear it.

A simple command to turn off the speaker doesn't seem like a very tall order. Well, try telling that to Viking's



tech support crew, if you can get through (it tends to be easier on the weekend). The first time, the guy told me this was a "level-two" question, that they didn't have the "resources" right then to help me. Turns out they were all Windows guys, apparently trying to avoid dealing with a Mac question. "Our Mac guy will be back in the morning," he said.

Recalling my days working with a standard terminal emulator, I asked whether the command "ATM0" would quiet the offending speaker, and was told that it probably would not.


Undeterred, I entered that very command using MacComCenter, the fax and communications package that's bundled with the modem. And it worked. Why did I even bother to call them?

But later, when I went to send a fax, the screechy tone returned with a vengeance, as if to say, "Nay, nay, no peace for thee!" I expected an initial fax


tone, but the sound continued the entire time I was sending the document, and by the time it was done, I was curled in a fetal position behind the couch, and my cat and dog were cowering in the upstairs closet. Subsequent calls to Viking's tech support line on a weekday left me on hold for more than two hours without any answer.


The Final Decision Viking's new modem works, but so do other 56 Kbps modems. If anything should go wrong, though, you're not in for much of a treat if you call tech support. Maybe you'll get lucky, but if your time is important, consider another brand.

— John Poultnrey

rating 

\$189, Natural Graphics
916-624-1436
www.naturalgfx.com
PowerPC required

 Simple, produces stunning images with realistic shadows and reflections, creates QuickTime movies

 Limited undo, temperamental object manipulation, iMac incompatibility

rating 

\$129, Viking Components
800-845-8777
www.vikingcomponents.com

 Good design, runs well once connected

 Horrendously noisy if not properly configured, tech support challenging at best

Font Reserve 2.0

Whoever designed the cumbersome method of dealing with fonts on a Mac must have had a perverse sense of humor. You have to pick among TrueType fonts, PostScript fonts, Type 1, Type 3, bitmap, outline, the whole nine yards. Font Reserve 2.0 is the second major incarnation of this database-like font-organization program. As with the original version, you set it up by adding all of the fonts on your Mac to the program's "vault," its custom-storage file. It organizes your fonts by such categories as format, family, name, and classification (such as serif, sans serif, and more). Font Reserve also figures out which ones are TrueType and which ones are PostScript, and it tells you if you have duplicates and damaged fonts, and whether your



PostScript fonts — which need one version for the printer and one for the screen — are lacking in either.

The new version builds upon that worthy base by making the vault a visible file, so you can easily back it up to another drive. The automatic activation feature, which turns on fonts as soon as a program needs them, is much faster in the new version. If you work in an art department or service bureau and have to add and trash fonts at a moment's notice, you'll be pleased to know that Font Reserve can be set to add fonts temporarily.

You use them, and as soon as you restart or turn off your Mac, they're forgotten.

You can also print out a sample sheet or an entire booklet covering your font library. And if you're a fan of AppleScript, you'll be pleased to know that many functions are scriptable.

The downsides are few. As with the

original version, Font Reserve is a memory hog, hoarding over 5MB of RAM when your Mac is running. Also, the publisher still hasn't figured out a way to make the program auto-activate fonts for Adobe's products, such as Illustrator, PageMaker, and Photoshop.

The Final Decision Whether your font collection is medium size or it's spilling out of your hard drive, Font Reserve is an essential tool. It takes font management far beyond the mess it usually is, into a new order of simplicity. I heartily recommend it.

— Gene Steinberg


rating


\$120 (CD version), \$100 (download version),

DiamondSoft

415-381-3503

www.diamondsoft.com

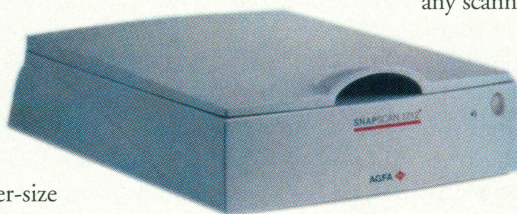
 Creates ultra-organized font database, auto-activates fonts in many programs, easy to learn

 Memory hog, auto-activate feature doesn't support Adobe programs

SnapScan 1212U

If you have an iMac but no scanner, chances are you're beginning to pine for one. Agfa is right there for you with the SnapScan 1212U, one of the most affordable scanners for the iMac.

The SnapScan accommodates up to letter-size paper and can scan at a maximum hardware resolution of 600 x 1,200 dots per inch (dpi). A competitive resolution for the price, it will allow you to capture intricate details such as 4-point type. The SnapScan can capture 36-bit color, which is more than adequate for picking up the subtlest shades. It has a sleep button on the outer case, so you can turn off the lamp to save energy when you're not using the scanner, and the lamp will pop back on again when you start a new scan. It comes with Color It! software for image editing,



PaperPort for managing your scans, and OmniPage Lite for OCR (optical character recognition).

Compared with Umax's Astra 1220U, the SnapScan was a little better at capturing 4-point italic text, a challenge for any scanner. But the

SnapScan fell behind on color gradients — blends came out a little coarser, and flesh tones

came out distinctly block-

ier. In terms of speed, it's similar to the Astra — both can scan a full-page image at 300 dpi in about two and a half minutes. A closely cropped 72 dpi photo of your cat, however, suitable for e-mailing, will take only 10 or 20 seconds.

The scanner is very inexpensive, but unfortunately, you get what you pay for when it comes to the driver software. It comes with beginning and advanced drivers, and both are very limited. They're both gray and two-dimensional, and even the advanced driver doesn't let you

change the contrast or brightness in real time; you have to scan in order to see the effect. Also, although they're relatively well behaved with the included Color It! software, they don't play nicely with Adobe Photoshop — cancelling brings up an arcane error message, and I got into many bouts of crashing until I trashed Photoshop's preferences file.

The Final Decision The SnapScan 1212U is among the least-expensive scanners available for the iMac. However, the driver software falls woefully short compared with those of slightly more expensive scanners.

— David Weiss


rating

\$99, Agfa

888-281-2302

www.agfahome.com

USB required

 Inexpensive, captures many colors and intricate details

 Driver software is rough, buggy with Photoshop

Getting Carded

400MHz G3 Power — and More **By** Alan Stafford

It's easy to lust after a Mac with a G3 processor; the lure of the exotic computing horsepower provided by the tiny chip with the short name is strong for those of who bought Macs from an earlier production cycle.

Though we paid through the nose for machines that were state of the art in years past, they're three-legged pack mules compared with the thoroughbred G3. The latest round of G3 processor upgrade cards promises to sew the leg back on and strap a rocket to your old mule's back.

However, fast steeds are unfamiliar territory to those of us who drive lesser breeds. The G3's speed is proven, but at what cost, financial and otherwise, does it come? Let's take a close look at several G3 upgrade cards and the reasons why you might want one — and why you might want to hold off.

Pick a Card, Any Card

We tested three upgrade cards that fit in PCI Power Macs, such as the 7500, 8500, and 9500 (plus numerous others, including some clones). They included XLR8's MachG3 400, which packs a 400MHz G3 with a 1MB backside cache, XLR8's MachG3 333, which has a 333MHz G3 with a 1MB backside cache, and a PowerLogix PowerForce G3 card, with a 300MHz G3 and a 512K backside cache.

We also tested two brand-new cards that are ZIF-socket models. These cards upgrade Apple's Power Mac G3 desktops, which use a G3 processor that rests on a set of gold pins; the pins slide into a little platform called a zero insertion force (ZIF) socket. We tried out a PowerLogix PowerForce G3 with a 400MHz G3 and a 1MB backside cache, and an XLR8 MachSpeed G3Z, also a 400MHz card with a 1MB backside cache.

Considering just processing power, our lowly Power Mac 7500 with one of these cards embarrasses Apple's fastest stock machine, a G3/333.

But benchmarks don't tell the whole story. It's easy to imagine the sheer pleasure of a really fast computer, but in real terms, is such speed really discernible, and is it really necessary for your computer tasks? As with almost everything computer related, it depends on what you do.

In really demanding applications — Photoshop is the classic example — the difference between any of these G3s and a PowerPC 604e is easy to see. It's not just expensive applications that show the G3's benefit; scrolling through Finder windows and menus is much, much faster and smoother. You know that chugging you often hear (and see) when you open a window with a long list of items? No more of that. The windows pop open eagerly. Just dealing with the Mac OS's interface becomes much more enjoyable.

However, if you only use your Mac for less greedy applications — e-mail, word processing, even Web browsing — you have less need for one of these high-buck cards. It's kind of like buying

a Porsche to drive only in Los Angeles rush-hour traffic. That's especially true with the ZIF models; going from a 233MHz G3 to a 400MHz G3 didn't seem that impressive with basic tasks.

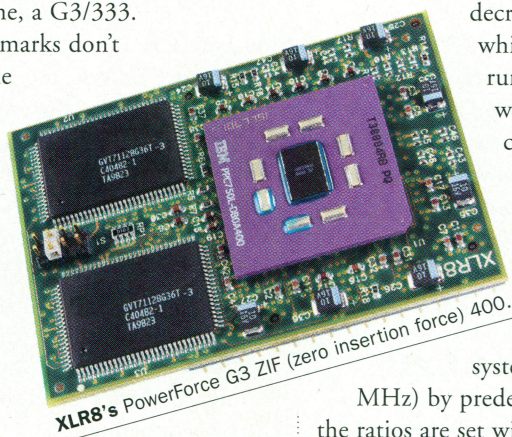
MegaHurts, Cache for Cache

Processor upgrade cards can be extremely fussy. All of the cards here allow you to increase (or decrease) the speed at which the processor runs and the speed at which the backside cache runs. However, experimentation can have drastic results. The speed of the processor is determined by multiplying the system bus speed (in

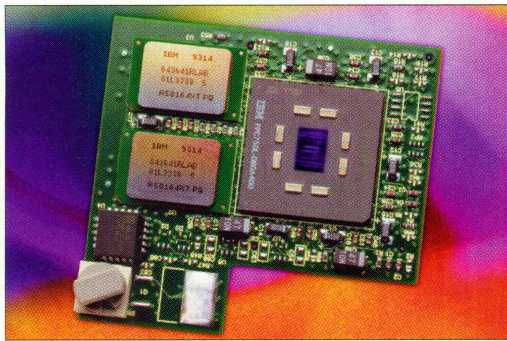
MHz) by predetermined bus ratios; the ratios are set with little switches on the cards. The XLR8 400MHz card needs a 50MHz bus speed and an 8:1 bus ratio to get 400MHz. XLR8, as does PowerLogix, offers settings to push the bus speed to 60MHz, for a potential 480MHz — or, with ZIFs, 533MHz!

Don't drool, though; the logic boards in older Macs won't tolerate such a cavalier attitude toward system bus speeds. While we were able to push the XLR8 400MHz card to 428MHz in the 7500 and the XLR8 333 card all the way to 375MHz with no problems, none of the other cards would allow any bumping of system bus or cache bus speeds whatsoever. Even XLR8's 400MHz ZIF card crashed often when pushed up a notch. With PowerLogix's 300MHz card, the 7500 wouldn't even boot up if we changed the default settings.

You can also adjust the speed at which the processor accesses its backside cache. Backside cache is



independent of the computer's system bus; the cache runs on a separate, faster cache bus. The bus speed is usually expressed as a divisor of the processor speed, such as 2:1, 3:1, 5:2, and, on the



A PowerLogix ZIF-socket card.

most expensive cards, 1:1 (they use better, more expensive cache). We found there's no faster way to cause a crash than to change the cache bus speed to anything higher than the default setting.

Another good way to cause a crash is to enable the computer's Level 3 cache. Most of the original Macs came with a Level 2 cache (cache is high-speed memory that stores frequently used instructions); it's a small card on the logic board, and it's accessed via the slow system bus. (With all PowerPC processors, Level 1 cache is on the processor itself.) G3 PowerPCs, on the other hand, use backside cache in lieu of logic board cache. So, the pecking order changes: L1 cache stays the same, but the backside cache is now designated L2 cache, and the logic board cache is designated L3 cache. Which is neither here nor there, because the L3 cache is rendered all but useless by the backside cache — in fact, both manufacturers say you can remove it on most machines.

PowerLogix's control panel is confusing with regard to the backside cache. In the control panel, it says "On Restart, Enable Backside Cache," but also "L2 cache is currently disabled" with a big button that says "Enable Now." The manual mixes L2 cache with L3 cache, so I wasn't sure what I was playing with. It didn't help that the Mac kept crashing when I hit the button.

And the Wiener Is ...

Using Symantec Norton Utilities' System Info, we found that the ZIF-socket 400MHz cards took the flag, with the PowerLogix eking out a tiny edge. That's partly because we plugged them into G3s: A faster 66MHz system

are overclocking or cache-speed bumping. That surprised us.

Still, the XLR8 400MHz old-style card was quite impressive, coming in a close third behind the ZIFs. The biggest surprise of the test, however, was the XLR8 333MHz card; it tolerated a big bump to 375MHz to bring it within about 10% of the 400MHz card.

The PowerLogix 300MHz card, though last, was still quite fast, and it's almost half the price of the XLR8 333MHz card. Despite the card's inability to overclock or cache-speed bump, that's a really good deal.

G3 Dreams and Strategies

The biggest reason these cards are so expensive is that the fastest chips are in short supply. The sweet spot — above which the cards take a big leap in price — is about a 300MHz G3 with 512K backside cache. That's one of the PowerLogix configurations we tested; but to tell you the truth, we've tested processor upgrade cards from several manufacturers, and the chips are the same among all upgrade-card manufacturers (though the PowerLogix cards were quite finicky about bus speed). We haven't found much difference in the manufacturers; most seem very reliable. So our recommendation, if you want to buy one of these cards, is to shop by price. But consider that you may need more RAM to take advantage of the extra speed.

Also, you may get a better machine by buying a new Mac. The 7500, at this point, should probably be up on blocks. Its 4X CD-ROM is too slow for some games, and its original hard drive is laughably small, and the rest of the machine is antiquated. We had to put duct tape on one of the hard drives to

keep it from buzzing all the time. One other recommendation: Wait. The prices on these cards fall all the time, and you can often find a great deal once even faster processors have arrived.

The Final Decision If you do decide to juice up the old mule, concentrate on not spending too much — the best value is not the bleeding-edge models. But if cost is no object, a 400MHz card can give you long-lasting bragging rights. **VIII**

John Poultney contributed to this review.

CPU Upgrade Cards

PowerForce G3 300MHz/512K backside cache

★★★★
\$450, PowerLogix
512-795-2978
www.powerlogix.com

Fast but cheap

Won't overclock

PowerForce G3 ZIF 400MHz/1MB backside cache

★★★★
\$1,539, PowerLogix
512-795-2978
www.powerlogix.com

Fastest Mac yet

Won't overclock; obscenely expensive

MachG3 333MHz/1MB backside cache

★★★★
\$900, XLR8
800-513-9744
www.xlr8.com

Takes overclocking well

Over the cost curve

MachG3 400MHz/1MB backside cache

★★★★
\$1,499, XLR8
800-513-9744
www.xlr8.com

Overclocks well, scary-fast

Obscenely expensive

MachSpeed G3Z 400MHz/1MB backside cache

★★★★
\$1,429, XLR8
800-513-9744
www.xlr8.com

Fast and loose

Obscenely expensive

StuffIt Deluxe 5.0

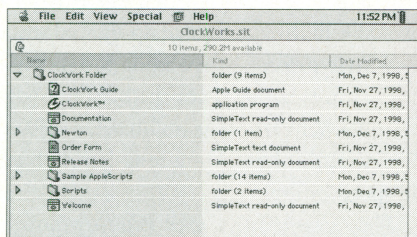
Aladdin Systems' StuffIt program has probably been as much a part of your Internet experience as your Web browser has. The program's ability to handle dozens of file formats across several computer platforms has made it an Internet "tool de force." With the release of version 5, Aladdin

has added Contextual Menu support, upgraded StuffIt's compression technology, and made its True Finder Integration (TFI) even more powerful than before.

Somehow Aladdin has managed to squeeze in a few new features and several changes into an already-excellent program. Foremost is the introduction of better compression technology that promises to squeeze up to 20% more out of a file. (In my tests, I averaged about 16%.) For those with large files or

slow modems — or any combination thereof — this can mean a healthy decrease in down time while files trickle their way across the Net.

Two caveats apply: First, squeezing that extra 20% means files take much longer to stuff; in some cases more than twice as long. So the time you gain by sending smaller files may be lost at the stuffing end of the deal. Second, you'll need



to be sure that the person at the receiving end has the freeware 5.0 version of StuffIt Expander. Archives using the new compression format are unreadable by earlier versions.

StuffIt now includes support for OS 8's Contextual Menus, making all the items available in StuffIt's Magic Menu accessible from a Contextual Menu. Also enhanced is the program's True Finder Integration. Double-clicking a StuffIt archive opens a Finder-like window,

allowing you to drag files between the Finder and the archive as if it were a normal window. You're also able to create archives simply by adding any combination of .sit, .bin, .hqx, or .sea to the end of a file's name, or by holding the Option key while selecting File from the Finder Menu, although sometimes this failed and I had to redo the procedure.

The Final Decision StuffIt Deluxe remains the cream of the compression crop. Cross-platform features, powerful compression, and archiving ease make it the best compression utility for the Mac.

— Jeff Battersby

rating ★★★★★

\$80, Aladdin Systems (Includes StuffIt Spacesaver)

831-761-6200

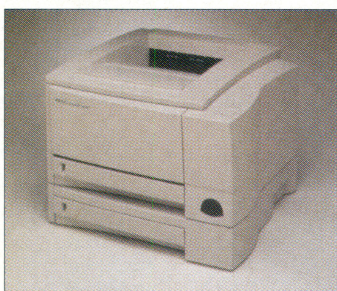
www.aladdinsys.com

Excellent Finder integration, contextual menu support, smaller archives

Smaller compression format takes significantly longer, archiving commands sometimes fail

LaserJet 2100TN

Those of you who are already impressed by Hewlett-Packard's venerable line of solid, dependable laser printers, get ready to have your socks knocked off. If you like the speed, resolution, and price of the 6MP, I can only imagine how you might feel about the new LaserJet 2100TN. If you're new to the laser world, here's a printer that will welcome you with open arms.



Laying down 1,200 dots per inch, the 2100 doubles the resolution of most of the printers in its price range. The difference is clearly visible on the page — photographs appear with extremely smooth gradients, since they're put together with the tiniest of dots. It makes the 6MP's output look blocky in comparison. There was, however, a very subtle vertical banding that appeared in photographs. I tried

swapping out the toner cartridge, even exchanging it for a new unit, and the banding remained.

In terms of speed, it creams the competition. The difference is not that dramatic with straight text; in my tests it came in about 17% faster than both GCC Technologies' Elite 12/600 and NEC's SuperScript 870. But the 2100TN took a little longer than two minutes to print an eight-page QuarkXPress document containing numerous fonts, images, and gradients — a file that the Elite took about four and a half minutes to print. Both printers come with 8MB of RAM.

The 2100TN is also highly affordable, considering that it's the same price as the 6MP was about six months ago. In addition to its other benefits, it also has a second paper tray. But if you want to start low, the base unit — which has 4MB of RAM, lacks a second paper tray, and is

not networkable — costs \$699.

The 2100 doesn't come with Adobe PostScript, but with HP's PostScript emulation, which HP says is equivalent to the real McCoy. In my tests, I found no PostScript-related problems.

Aside from the subtle banding problem, I did find a two other minor ones. It makes a constant buzzing sound, which I notice despite working in a relatively noisy office. Also, when you install the printer, it's not called "LaserJet 2100TN," as one would expect, but "PET."

The Final Decision Despite its drawbacks, the 2100TN could possibly be the sharpest, fastest laser in town.

— David Weiss

rating ★★★★★

\$999, Hewlett-Packard

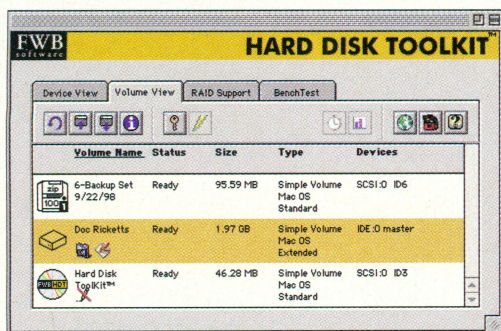
800-527-3753

www.hp.com

Incredible resolution, blazing speed, networkable, dual paper cassettes, outstanding price

Very subtle banding in photographs, makes audible buzz

Hard Disk Toolkit



Hard Disk Toolkit is designed to be a techie's dream come true. It contains a half-dozen utilities and an equal number of tools for configuring, formatting, testing, and updating drivers on your hard disk. The program is capable of working with a wide range of storage devices, including removables.

Hard Disk Toolkit is also one of the most inexpensive ways to create RAID volumes, which are spread across two or more drives. (RAID stands for redundant array of independent disks.)

The program comes with a bootable

CD that allows you to check and correct a thrashed disk before installing the program — certainly a benefit to those with disk drives that aren't driving. Once the program is installed, you'll need to install FWB's hard-disk drivers in order to make use of Toolkit's vast toolset. Here the trouble began. Each time I tried to install the drivers, I was greeted with a message stating that there wasn't

enough room on my hard disk to complete the install. Therefore, I couldn't use any of the tools. An anonymous call to tech support resulted in a similarly disappointing response: "Try using Norton Utilities to defrag your drive. Maybe it will work then." If it doesn't? "Then you won't be able to use the program." To the tech's credit, it worked. But it would have been nice if this was in the manual.

Among Hard Disk Toolkit's high-end features is the capability to create multiple partitions on a single drive

without having to reformat the entire drive — a great feature for making the most out of a large hard drive. Sadly, this feature requires a standard disk format. It can't be used on HFS+ disks, Apple's new hard disk standard. So, if you're using HFS+, you'll have to reformat your disk anyway.

The Final Decision If you use RAID volumes, format disks on a regular basis, or don't need a dictionary to understand what words like "striping," "spanning," or "mirroring" mean, this is the tool for you. If you're just trying to solve normal problems, pick up a copy of Norton Utilities or TechTool Pro.

— Jeff Battersby

rating

\$130, FWB Software
 415-345-4300
 www.fwb.com

Powerful features for high-end users

Not a stand-alone solution, tricky installation, high-end features not compatible with HFS+

SuperDisk Drive

A SuperDisk drive is a very good thing, especially for those with iMacs. Not only can they read 120MB SuperDisks, which are as slim and trim as a regular 1.4MB floppy disk, but they can *read* regular ol' floppy disks as well. Imation's SuperDisk drive was the first, and Winstation's drive follows suit.



Like the Imation drive, the Winstation drive is designed not only to sit next to the iMac and do its duty, but also to match its distinctive look. But while the Imation drive did a bang-up job in this respect, the Winstation drive doesn't exactly look as though it's of the same ilk as the iMac. Although it's blue and white, no part of it even comes close to being translucent. And we all know how important translucency is

when it comes to jibing with the iMac. Using matte-textured plastics, the Winstation drive looks as though it's made of Play-Dough. And although it's compatible with both iMacs and Windows USB PCs, the manual only has installation instructions for the Windows world.

The Winstation's advantage is that it can stand upright, thus saving precious space on your desk. However, it's a little annoying that you can't set it down flat even if you want to — there are no feet on that side of the drive.

In terms of performance, the Winstation transfers data at about the same speed as the Imation drive, or somewhere between 6MB and 15MB per minute. Considering that USB has a speed limit of about 90MB per minute, we're still waiting for the drive that comes close to that. And performance with floppy disks is a bit slower.

The drive mechanism seemed a bit finicky — on a few occasions, when I put the disk in, it failed to appear on the desktop, and I had to reinsert it.

The Final Decision If you need to be able to read floppies, and you also want the benefits of high-capacity storage, a SuperDisk drive is a clever solution. And if you want to be able to keep your SuperDisk in the vertical position, you might want to pick up a Winstation SuperDisk Drive. But because the disk failed to appear occasionally, I tend to trust the Imation drive more. Overall that drive seems better put together. And Imation got the look down, too.

rating

\$149, Winstation
 509-765-7759
 www.winstation.com
 iMac required

Can stand upright, reads floppies and SuperDisks

Must stand upright, finicky mechanics, no Mac installation instructions

Paint Me a Canvas

Canvas 6 Mixes Vectors and Pixels **By** Chris McVeigh

Canvas was one of the first graphics applications to marry vector illustrations (which are composed of formulas that describe lines) and bit-mapped images (which are composed of a grid of pixels). Despite its technical prowess and precision, however, it failed to capture a sizable share of the graphics application market.

Deneba now launches itself back into the fray with Canvas 6, a robust new upgrade that aims high.

The crowning achievement of Canvas 6 is its SpriteLayer technology, which allows you to apply advanced transparency effects to both vector objects and pixel images. The most impressive of these effects is channel-mask transparency. Imagine you have a large pixel image of a new car and you want to create a cut-away revealing the engine. With Canvas 6, you can simply import the car image and use the paintbrush tools to erase the car's hood. All objects remain editable, too — you can adjust the color and shape of the engine components at any time, without the hassle of re-exporting and recompiling the image.

One of Canvas 6's more subtle new features is its knife tool. You can slice multiple objects in half simply by drawing a meandering line across them. When you're finished, you can pull the objects apart like pieces of a jigsaw puzzle.

Deneba has incorporated a new Guides layer into Canvas 6 that allows you to put alignment guides in front or in back of objects. The real ingenuity, however, lies in the ability to create objects in the Guides layer. The objects then become guides themselves, to which other objects can snap.

Full support for layered Photoshop images has been rolled into Canvas 6. Importing a layered-image file gives you a series of stacked images grouped

together to mimic the layer effect. To edit the separate layers, you ungroup the image and select the layer you wish to modify.

Canvas 6 reduces screen clutter by allowing floating palettes to be docked in a narrow toolbar near the top of the display. Docked palettes are represented by a tab, and clicking on the tab drops the palette down for use.

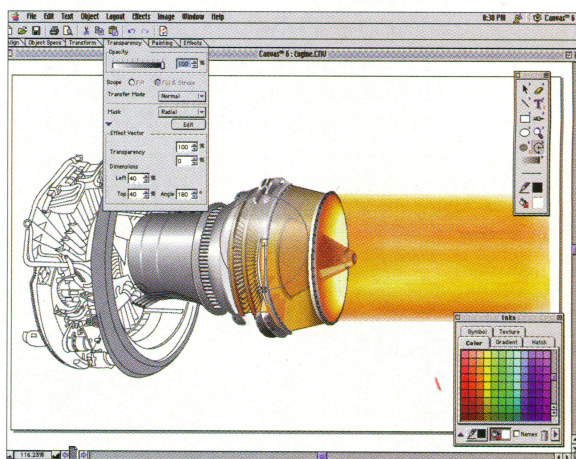
Unfortunately, the application is hampered by several irksome, counter-intuitive interface anomalies. For some basic tasks, Canvas 6 uses commands that differ from those in most other Macintosh applications. You traditionally modify the Zoom tool from zoom in to zoom out, for example, by holding down the Option key. In Canvas, however, it's the Shift key. Selecting and deselecting objects is equally unfamiliar. To select an object, you single-click, as you would in other such programs. However, to select an object while another object is selected, you must double-click. An additional click is required to actually edit the object. To the uninitiated, it can be bewildering.

It is possible, however, to customize keyboard commands, and Deneba reps claim that there is a way to revert to normal Macintosh selection methods, but it

begs the question: Why wasn't it the default?

Canvas 6 lacks the advanced object-distortion tools found in CorelDraw 8, and it does not support customizable vector brushes such as those found in Adobe Illustrator 8.

Another frustration is that vector objects can only be edited in a low-resolution preview mode — a simple shape with a blue outline and yellow fill will revert to a simple black line while the object is being edited.




The Final Decision Deneba's latest iteration of Canvas is an admirable upgrade that will certainly satisfy long-standing Canvas fans. Although it lacks some high-end features, and its interface may vex a segment of users, Canvas 6's new features bring it closer than ever to programs like Illustrator and Freehand. **||||**

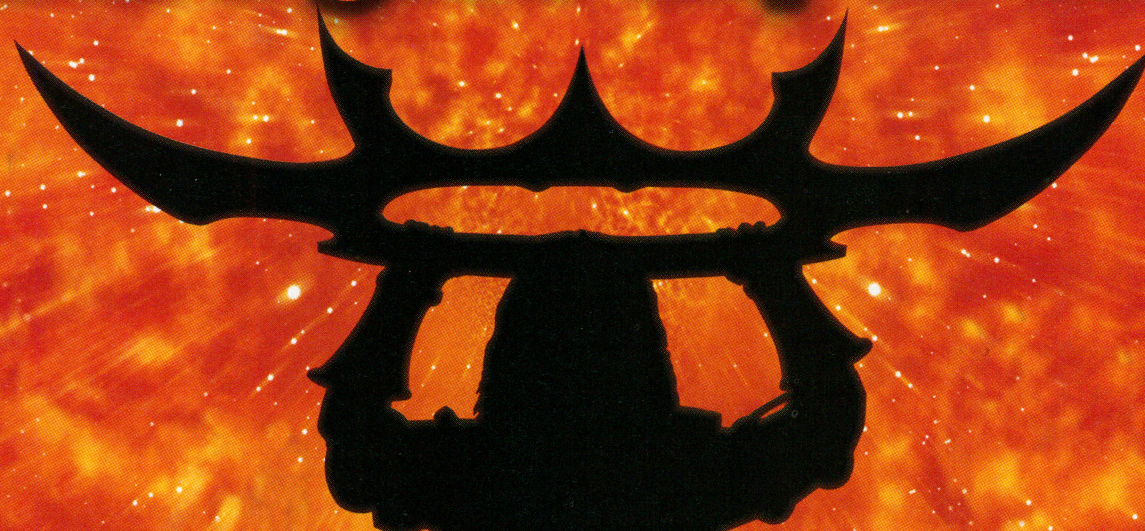
rating

\$375, Deneba
305-596-5644
www.deneba.com
PowerPC required

 Excellent transparency tools, new knife tool, support for layered Photoshop images

 Unintuitive interactivity procedures, limited distortion tools, doesn't allow you to define vector brushes

It is a good day to die.



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Online Banking

Does It Mean Good-bye to ATMs and Tellers?

“I have to do my bills,” he would whine, three, four, sometimes five times a month. “Why don’t you just pay your bills once a month and have it over with?” I finally said.

This man could do with some online banking. He could easily set up a system that would automatically pay his recurring bills, pay random bills at the click of a mouse, check balance information, and even order traveler’s checks with no whimpering and no fuss. Online research company Jupiter Communications reported that at the end of 1997, 4.5 million Americans were using online banking — a 78% jump from the previous year. Jupiter expects the total number to reach 22% — that’s one in five American households — by the year 2002. Will you be among them?

What Does It Do?

Many online bank sites will pay your bills and debit your account — for a fee, or for free if you have a specified minimum balance. You can set up your account to automatically take care of unchanging monthly bills, such as insurance, house payments, or the cable bill. It can be a blissful burden-lifter, if your expenses and your income are fixed and properly scheduled. However, it’s not a great idea if you play fast and loose with the balance in your checking account; most banks won’t send a check or transfer funds if your account can’t cover it. You can pay bills with varying amounts, such as electric or phone bills or invoices from individuals, on a one-time basis, by

setting them up as “payees” and scheduling a pay date.

In fact, most online banking programs allow you to perform most, if not all, of the services available in a branch from your home or office computer. You can apply for accounts, and questions can be answered by e-mail. Many programs, including

those of Wells Fargo and Bank of America, work with accounting software such as Quicken to streamline the personal financial management process, if you’re willing to put in the necessary setup and maintenance time. Most will allow you to access your account records, storing from 60 to 90 days’ worth of your back information. They will also send you copies of checks if you request.

What it doesn’t do — yet — is bail you out at the 11th hour. If your electricity bill is due at midnight on the

12th, you can’t log on at 11:30 P.M. and expect to pay your bill and beat the late fees. Most banks with online payment capabilities have a standard five-day turnaround. It’s likely that your bill will get paid sooner, especially if your bank has an agreement with the vendor in question (say a local phone-service provider), but there are no guarantees.

If, however, you have related accounts, such as a Citibank Visa and a Citibank checking account, you can transfer funds in real time, and beat the clock that way.

As for paying individuals electronically, it’s doable, but at a much slower rate than cyber-

speed: Most banks allow you to make your request online and schedule a pay date, and then the bank will cut a paper check from your account and mail it to your payee. This is the time a bank is likely to take the full five-day period, so plan ahead.

What About Strictly Online Banking?

Virtual banks have started to spring up on the Net in the last couple of years. The advantages to maintaining accounts with such institutions is that they pay a



higher interest rate for deposits and offer more free services. The drawbacks include some difficulty and fees for obtaining cash, and the necessity of conducting money transfers through direct deposit or the mail.

Internet credit card success story

NextCard recently announced a cash infusion of \$38 million in venture capital to build an Internet bank. Security First Network Bank and Net.Bank (formerly known as Atlanta Bank) are up and running, as are CompuBank, and First USA, a subsidiary of megabank Bank One. Net.Bank offers loans and a brokerage on its site, as well as the highest interest rate for checking accounts at the time of this writing (3.07%). All of them are open 24/7 and are FDIC insured. Most online banks are members of the Cirrus and Interlink networks. You could face charges from other banks when you use their ATMs to get cash, but some Internet banks maintain lists of surcharge-free ATMs on their Websites.

What Are the Drawbacks?

Gil Spencer is a Silicon Valley-based engineer who has done his banking online for 15 years. Until three years ago he used a terminal interface (a bulletin board-type application), but now he uses the Web and Quicken. "In the last 15 years there have been five times where they've dropped a payment. Two have happened in the last six months where they've dropped my house payment," he said. "You have to call and beat them up; [according to Bank of America] it's been the payee's fault. A lot of companies don't realize that they get a bulk check in the mail." In other words, the bank sends one check to one vendor covering payments from several customers. As with standard banking, it's important to keep a careful eye on your accounts to avoid late charges and agonizingly long bouts on the phone with your vendors or bank.

Time may also be a drawback. It was a slow day on the T1 at *MacHome*, but when we experimented with a Wells Fargo checking account, we found that it took 2 minutes 17 seconds to find out balance information online, versus 1 minute 10 seconds by telephone. Both

systems were living in the past — balances didn't include transactions that had been made earlier the same day.

What Does It Cost?

Fees vary from bank to bank. Most, like Wells Fargo, allow for free online banking, but

charge you for check writing. Wells Fargo charges \$5 per month for the first 40 transactions and 40 cents for each additional transaction — unless you maintain a \$5,000 balance, in which case, check writing is free. Citibank's Direct Access PC Banking is free with a \$1,500 balance. If you fit the profile of the average online banker — 30 to 50 years old and a working professional in management or a technical field, with an average balance of \$15,000 — then bank fees should be no problem.

Safety Concerns

There are three major safety issues with online banking: FDIC insurance, the Year 2000 problem, and encryption. Online banking sites operated by major banks, and all the Net banks we looked at, are FDIC insured and Year 2000 compliant. Almost all support 128-bit encryption — one of the safest methods of encryption available. (Security First Network Bank uses 40-bit encryption, but offers a no-risk guarantee that funds are safe from hackers and predators.) Your browser must support the bank's encryption protocol; you'll need to fill out an online affidavit to download the 128-bit versions of Communicator or Internet Explorer.

What Do You Need to Run It?

It varies. Citibank's plan is currently a platform-agnostic Web interface. At the time of this writing, the company said it is developing a Mac software client, which will store banking data on your computer rather than Citibank's servers, but is unsure when the software will be finished. For now, however, the company advises simply using the Web, because the software, which takes up disk space on your computer, will just connect you to an IBM server — but some people feel safer having the data stored on their own systems. Citibank is also planning to test-market a site that is an enhanced version of its current online banking offering, Direct Access, which will combine banking, brokerage, and financial information.

Bank of America and Wells Fargo both offer data in Quicken format, so you can download your information directly to the program, though there may be extra charges — Wells charges a \$3 monthly fee for the privilege.

Bank of Tomorrow

According to a recent report in the *New York Times*, only 30 of the top 100 banks have a transactional Website. However, 30 to 40 more are planning to add online banking in the immediate future, with the others following shortly behind. Experts estimate that the cost of processing electronic transactions is a fraction (10 to 20%) of the cost of handling the same transactions in a bank, so we can expect to see more enticements and fewer drawbacks to online banking in the future. ■■■

Online Banks

Bank of America
www.bofa.com

Citibank
www.citibank.com

CompuBank
www.compupbank.com

First USA
www.firstusa.com

Net.Bank
www.netbank.com

Security First Network Bank
www.sfnb.com

The New Donna Rice

Eleven Years Later, She Speaks Out on Net Porn

You remember Donna Rice. In 1988, she unwittingly became a household name because of her involvement with Gary Hart, the Colorado senator who was then the Democratic front-runner for the presidency. As the media onslaught heightened, Hart dropped his bid for the office, and Rice, after a brief moment in the public eye, dropped from sight.

Today, she's back in the spotlight as Donna Rice Hughes (her married name), and she's fighting to keep children safe from online porn and other dangers. As vice president of marketing and public relations for the Virginia-based nonprofit firm Enough Is Enough (EIE), she's lobbying for tougher regulations that will keep inappropriate materials and other harmful influences away from the curious eyes of children surfing the Net; she's also working for stepped-up enforcement of existing laws against pornography.

Rice Hughes's new book, *Kids Online: Protecting Your Children in Cyberspace* (\$12, Baker Book House), details the problems that kids and families face from unrestricted online surfing and offers various solutions, providing both technical and personal approaches. It also calls for parents to get involved in the fight against easy access by minors to inappropriate and illegal materials. Her organization advocates a three-pronged approach to this problem, with participation from end users, the technical community, and law-enforcement agencies.

Aside from describing the potential dangers of unlimited Net access for

minors in sometimes very specific and unpleasant terms, the tome contains resources for software filters and "clean" ISPs — those that allow access only to a subset of Web resources. Mac users should find the book useful because it notes whether Mac versions of software are available.

MacHome recently spoke with Rice Hughes about her current quest, her new book, and her new relationship with the media.

What was the catalyst for you to start doing what you're doing now?

I joined EIE about five years ago to head up marketing and fundraising in their fight against child exploitation. At the time they weren't doing much on the Internet, and it wasn't really that widespread yet anyway. But it was around. I saw an ad on a Usenet listing for a BBS [bulletin board system, one of the World Wide Web's precursors that involved closed, dial-up information boards

usually dedicated to specific topics; these are still in limited use today] that turned out to be filled with all types of deviant pornography and illegal content. Then I started taking a closer look at what was being posted in various Usenet groups and I said, "Oh my god." It immediately became apparent to me that minors could instantly have access — for free — to the types of

deviant and illegal materials that their parents couldn't even buy in an adult bookstore.

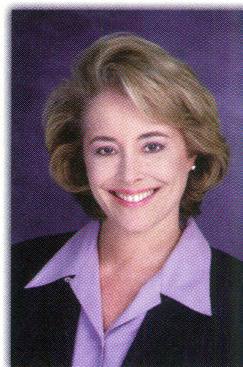
EIE is primarily concerned with the safety of children and doesn't make judgments on adult material intended for use by adults. We'd like to see the laws enforced against the distribution of illegal material, but we're primarily

concerned about ease of access to adult materials for minors over the Net.

When we started talking about it, there were lots of communities that figured it wasn't their problem, that there were adult bookstores and so forth on the other side of town, but their kids were safe. Once we began showing the extent of porn on the Web, awareness started taking off, though it's still largely ignored in many communities.

Do you find that children's knowledge of computers often surpasses that of their parents?

I do. In fact, that's one of the main paradoxes that we deal with. Parents



who've never used computers before — let alone the Net — will often become overwhelmed with the technology and the terminology. Their solution will sometimes be, "I'm just not going to let the kids have the Internet at home." But the home is the best place for them to teach their kids safety habits, and they're not taking into account the numerous other places — schools, the library, friends' houses — where kids can access the Net.

It can be a real challenge to some parents to become computer literate, and that's part of what my book is about. I wanted to put a resource into the hands of the home users, providing them with enough information to understand the technology first, then the dangers, and then the safety steps they need to take. One way we suggest parents can learn about the Internet — and even get closer to their kids while doing so — is to let the kids show them around.

Except for financial reasons, it's a real mistake for parents not to get a computer for their kids, because this is the way the world is heading — toward a connected economy and culture. It makes sense for their future for them to have computer skills, and the educational resources available are amazing. Plus they're able to correspond with friends and teachers and get information instantly. It has so much potential for everybody, but the way it's being exploited by pornographers and pedophiles is unprecedented. So parents and teachers need to spend some time to understand what's out there and the potential harm it can cause to children.

Describe a typical scenario in which a child is endangered online.

Chat rooms [on America Online (AOL) or the Net] are the playgrounds of the '90s and are very popular with kids. So the pedophiles go there too; they go where the kids are, like they always have. But online, they can interact with kids

and pretend to be kids themselves, which is something they could never do in the physical world. Once someone gets to know a kid, they might suggest a meeting, which is something a child should never agree to unless they already know a person. The thing is, studies show these types of people will sometimes spend a very long time — even a year or more — getting to know a child online before making any sort of move.

And if a meeting should take place — well, as we've all read, virtually anything could happen.

Sometimes pedophiles will send pornographic pictures in e-mails to kids, and this is one of the reasons we discourage kids from responding to unsolicited e-mails or Instant Messages [on AOL]. Once kids see pictures like this, it's impossible to erase them from memory. Parents can usually tell if there are pictures attached to mail messages by looking for attachments ending with .gif or .jpeg. Also on AOL, we don't recommend kids fill out Member Profiles, other than maybe their interests; certainly not their age and sex because that's the sort of thing that predators look for.

Do the benefits of being online outweigh the risks for today's kids?

They do, as long as the child is being safeguarded. As I mentioned, there's no educational resource like the Net, especially in terms of instantly updated information. The textbooks we used as kids were completed months or even years before we got them, and it really puts kids at a disadvantage to be taught with outdated information. But on the other hand, you can't measure the trauma of a child being damaged early in life by porn and predators.

What are some of the warning signs people should watch for, and how would you advise parents to react if they suspect

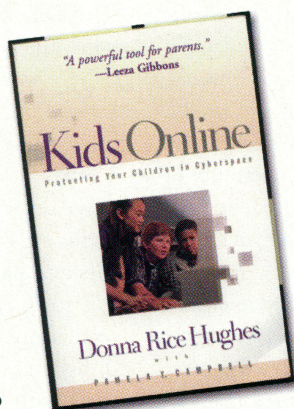
their kids are being exposed to inappropriate material?

If a child is spending a lot of time online late at night or behind a locked door, that's a sign. EIE has received lots of reports from parents seeing a blue glow emanating from their kids' bedrooms late at night, and for this reason we don't recommend putting a computer into a kid's private room, just as we don't recommend unrestricted Net access for them. We always suggest keeping the computer in a central location, such as the living room, so parents can monitor the kids without being intrusive. Then there's secretiveness. If you see mysterious e-mails for your kids from people you don't know, you should ask who that is, just as you would if your child were to bring home another child from school you hadn't met yet. Let your kids know you'll monitor them too, so you won't lose their trust by "sneaking" into their files.

You should also keep an eye out for hidden disks — these are the '90s equivalent of hiding magazines under a mattress!

Can you elaborate on the "three-pronged" approach to the problem you talk about in your book?

We see equal responsibility for the legal community (as in government and law enforcement), the technology community, and the public, which includes all the end-users — parents, schools, business owners, and whatnot. One question is what the end consumers can do to safeguard themselves against the pitfalls of the Net. Another would be what the tech community can do to develop and implement filtering and other types of controls, and also to better work with the law enforcement agencies to better comply with current law.



Kids Online: Protecting Your Children in Cyberspace
by Donna Rice Hughes
\$12, Baker Book House

Donna Rice Hughes's Website
www.protectkids.com

Enough Is Enough
www.enough.org
888-236-6844

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Questions

Problems

Complaints

End users are having to shoulder a large part of the burden in terms of reporting violations because many of the laws are still not being enforced. The legal community has ignored the question, and the main laws being violated are the obscenity regulations. People ask, "How can kids get hold of this if it's illegal?" Because the laws aren't being enforced! Despite the easy availability of deviant pornography, there hasn't been one obscenity conviction from the Net. There were the well-known Orchid Club convictions, but those were classified as child porn. And what's also being ignored is that it's illegal to display or distribute regular adult-oriented material, like *Penthouse* or *Playboy*, to kids.

The approach most of those sites take isn't the same as enforcement at all. They say, "Click here to certify that you're over 18." *Click!* Hello? That's the equivalent of a 12-year-old kid putting a six-pack of beer on the counter at Seven-Eleven, and the clerk rings it up just because the kids *says* he's 18.

We're trying to give more resources to the end-user community, whether computer-literate or not, and provide them with rules and tools — guidelines for responsible usage and then software solutions for added protection. Even with the best supervision, kids can accidentally come across porn just by entering certain words in a search engine. Just words like "toys," "horses," "dolls," or a phrase like "Little Women" can bring up all kinds of sex-related links that can expose kids to deviant porn or to sexual predators.

Many sites are manipulative, in that they register common misspellings or variations of well-known sites so that kids trying to access something legitimate might be exposed to porn. For example, there's *whitehouse.com*, a sex site that takes advantage of the large number of people searching for *whitehouse.gov*, the actual site for the White House. You have to watch the URL suffixes.

Are you against all porn, or the easy availability of it via the Net? Our focus is mainly on protecting children; we don't get into the discussions

of legal material intended for adults. But a lot of studies have shown that porn can be addictive for many people and lead to a need for more deviant, hard-core material, and sometimes is a contributing factor in violence. I believe we're all responsible for our own actions, but for a lot of people, just plain *images* are no longer enough after a time.

We see a lot of bad things at EIE, and we're trying to minimize the dangers and harm that can be caused by this stuff. As a culture we've accepted regulations on potentially dangerous things like alcohol, but we're not quite there with porn yet.

Do you think the media has gotten worse or better in its approach to prurient topics since 1988?

I don't think it's any worse than it was then. It's no more sensational than it was, but there seems to be a lot more quantity. Like the situation with Clinton — he's a sitting president so it seems more newsworthy than other cases, so you're seeing a lot more coverage than you would with other people.

The media, of course, did quite a number on me back then; it is kind of ironic that I'm working with them now to get the word out on something worthwhile.

What would you say to Seth Warshavsky (owner of Seattle-based Internet Entertainment Group, one of the largest porn operations on the Net) or other porn-site operators?

I don't know him personally, but I know he's an entrepreneur. And there are lots of people like him that look at porn from a business standpoint because it's a big moneymaker. Once someone becomes addicted, there's a ready audience for these sites. I wouldn't make any judgments on anyone personally, but I would say that there's a lot of evidence of the harm caused by porn, and anyone who's willfully exploiting that just for financial gain should take a good look at themselves in the mirror. **III**

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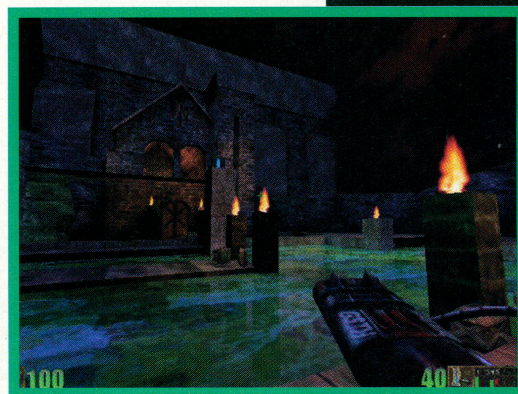
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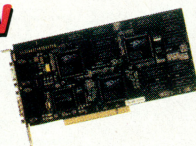
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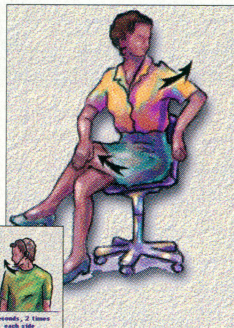


Micro Conversions, Inc.

Stretch, Desk Jockey, Stretch

We all know that we're supposed to stretch before physical exertion of any kind, but what about stretching before an extended bout with the computer? It's the kind of thing you read about in a magazine and think, "I should really do that," and then immediately forget about. But Stretchware, distributed by Shelter Publications, reminds you, with an icon, a sound, or a dialog box, to stretch, and then gives you detailed instructions on how to do so.

The software provides 14 kinds of stretches. Some you should do before you start work, and some you can do while you're on the phone; there are also specific stretches for graphic artists and people who surf the Internet frequently. You can program the interface to run you through the stretches of your choice at set intervals or at your discretion. Regular stretching helps prevent repetitive strain injuries, such as carpal tunnel syndrome. *Shelter Publications, 800-307-0131, www.shelterpub.com*



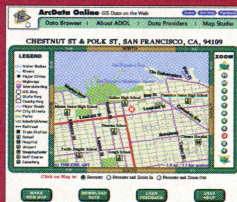
Small World Book

IBM just released the *World Book Macintosh Edition*, a full-featured multimedia encyclopedia. In addition to substantive reference material, the disc is punctuated with animation, videos, and 3D mini-tours to help students grasp complex topics with ease. Marketed for ages 10 and up, the information is designed to be appropriate for the age group or grade level most likely to be seeking the information. Thousands of Web links are also included to open up the Web in a targeted manner and to provide access to online updates and the *World Book* archives, which date back to 1922.

IBM, 800-320-8377, www.worldbook.com

Students and Geography

Students can learn firsthand about geography by working with the same digital geography tools that merge science, technology, and information together for solving real-world problems in banking, retail, insurance, real estate, health care, energy, and more," said Jack Dangermond, president of the Educational Systems Research Institute (ESRI). He's referring to ArcVoyager Special Edition software. Packets including the ArcVoyager CD-ROM were mailed to 222,000 teachers and used by approximately 2 million students as part of National Geography Week. The software allowed students to use geographic information system (GIS) mapping software combined with population data, and is also available at the ESRI Website. *ESRI, www.esri.com*



Internet Beats Beer

Into the "What's happening with the youth of today" file goes the following tidbit. The Student Monitor, which has for the past 10 years conducted a study on college campuses, concluded that for the first time ever Internet use eclipsed beer drinking as the most popular pastime of college students. *MacHome*, however, encourages students to put down their mice and party like it's 1999, because it is. *Student Monitor, <http://smcinc.com/monitor>*

Tools for Teachers

The revolution in teaching that technology can offer will not happen unless teachers are given the opportunity to support and help lead it," said David Aylward, director of the 21st Century Teachers Network. The numbers bear testimony to his statement: A whopping 84% of teachers surveyed think that they need

more training in the field of technology. To help, the 21st Century Teachers Network now offers free professional development for teachers.

Conceived at the White House in 1996 and funded by the University of Phoenix to the tune of \$1 million, the Network recently opened its Website, which provides teachers with free tools in the form of data collection, lesson sharing, and online mentoring. Education and technology news and events are also posted to the site. *21st Century Teachers Network, 202-429-0579, www.21ct.org*



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Blue's ABC Time Activities



\$20, Humongous Entertainment
800-499-8386

www.humongous.com

Ages 3 to 8

Welcome to the home of an amiable puppy named Blue. Her owner, Steve, wants you to help her find words for her wordbook and write stories with them. Steve reassuringly tells you he's got "a feeling" that you can come up with some "pretty amazing stories," leaving you with Blue to get started.

The characters — Mailbox, Slippery Soap, and others — will be familiar to fans of Blue's TV show. From the living room, click on any of them to move to a word game. In Shovel and Pail's garden, Blue needs help finding her way by following the alphabet. Or head out the window to the jungle, where Lion Prince tosses Blue a camera to snap safari animals. Helping Blue with these tasks earns you words for her wordbook. As you and Blue hop around collecting them, you hear the song, "Blue skidoos, you can too!" Sounds like fun, doesn't it? It would be, if the characters



gave clear directions as Steve does at the outset. Instead, they mumble and offer a few tips on how to play. Some words are so unintelligible that Blue, with her affirmative nods and barks, is a clear communicator in comparison. The skill level is also inconsistent. Felt Friends has kids endeavoring to spell "box," while Lion Prince expects them to read "dragonfly" in small letters that flash quickly onscreen.

Kids can change activities freely (I returned repeatedly for Snacktime with Mr. Salt and Mrs. Pepper who, with their silly French accents, are the easiest to understand). But, with few indications of when to move on, the game sometimes feels purposeless. Even when the stories are all written, it's up to you to figure out when it's over and click on the doormat to exit.

This game is more likely to improve children's intuition skills than their vocabulary. But once children have figured it out, they can print the zany stories they've written as proof of their achievement. Still, if you want your kids to stick with a game to help with their ABCs, investigate other options when you skidoo to the store.

— Kate Rope

The Princeton Review: Inside the GRE, GMAT & LSAT



\$30, The Learning Company
800-323-8088

www.learningco.com

To gain admission to most graduate school programs, you must subject yourself to one of three examinations prepared by the Educational Testing System (ETS): the Graduate Record Exam (GRE), the Graduate Management Exam (GMAT), or the Law School Admission Test (LSAT). Every section of every test is rife with trick questions and trap answers designed to confuse you and to bar your admittance to your school of choice.

That's where the Princeton Review comes in. Its newest CD-ROM set, *Inside the GRE, GMAT & LSAT*, makes the torture of preparing for ETS as painless as possible.

Question #1. Each of the three CD-ROMs:

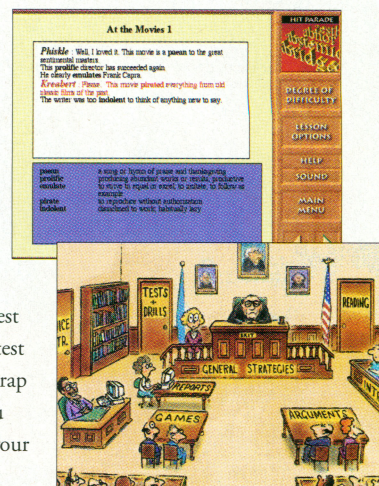
- A) Guarantees higher scores or your money back
- B) Provides video tutoring by the Princeton Review's top instructors
- C) Offers proven test-taking strategies and customized study plans
- D) Furnishes drills, full-length practice tests, and scoring analyses
- E) All of the above

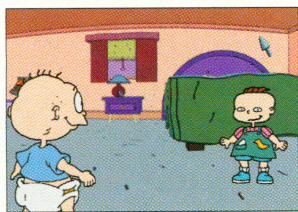
If you picked E, way to go! The Princeton Review would call answers A through D "partial answers" meant to trip you up. If you are easily fooled, no worries. Click on General Strategies to learn how to avoid such pitfalls. Review sections of math, verbal, and analytical skills are very helpful. Articulate instructors (one teacher calls ETS "the architects of your oppression") go over the material patiently, giving you tons of practice before you enter the Tests and Drills Section.

The software's clear, concise text is peppered with humor, which lets you laugh in the face of tension. I had a ball in the Hit Parade section of the GRE CD-ROM, in which character dialogues, such as *At the Movies*, use words in context. "This is a pedestrian, hackneyed story," Phiskle says. "The director tells it with his usual bombast and heavy-handed pedantry." The LSAT Arguments section employs a car salesman who tries to convince you that he's got the car for you. His reasoning: "It's got style and pizzazz." Of course, he is assuming that you want a car with style and pizzazz. "Think of a car salesman when you read argument questions on the test," the instructor says. "It will make pinpointing the assumptions both easier and more enjoyable."

Although I wish the CD-ROMs' animated characters were more involved in the learning process, the test prep is otherwise infallible. My scores have increased by 100 points on all three exams, and I'm visiting the software's Guidance sections to research Harvard, Stanford, and MIT, respectively.

— Amy Shafroon





Rugrats Adventure Game



\$30, Broderbund
415-382-4400
www.broderbund.com
Ages 6 to 10
PowerPC required

It's something like *Myst* meets a Huggies commercial. Broderbund's *Rugrats Adventure Game* is an extensive and richly animated scavenger hunt — kids hone their powers of memory and observation as they attempt to gather objects to save Reptar, the babies' toy dinosaur.

After evil sister Angelica tosses Reptar into the trash, the babies must follow a sequence of tasks in order to rescue him. Tools

such as screwdrivers, dog bowls, and eggshells can be picked up and placed into Tommy's diaper for later use. The catch is that you can only take the object at hand, so memory is vital. Finding these objects is no easy task — kids must lumber through the three-story house, remembering where things are placed, so that similar groups of objects can be combined to solve specific puzzles. Personal relations also come into play as you try to find ways to get Angelica to help out (bribery works best).

Clicking on the babies themselves offers clues, but even at the easiest levels their advice is often cryptic or uninformative. Three difficulty settings keep game play challenging, but there are so many games, levels, and options within each screen that it's hard to imagine running out of activities.

— Anne Marie Feld



Travel the World with Timmy



\$20, Edmark
800-691-2986
www.edmark.com
Ages 8 to 12

Travel the World with Timmy introduces English-speaking kids to the languages and cultures of Japan, Kenya, and Argentina. A facile interface allows kids to click on the country of their choice and participate in five activities: Games, Build a Village, Storybook, Song, and Paint.

Games may be a little less than challenging for the target

audience of kids ages eight to 12: a tic-tac-toe game in Kenya, an object-matching game in Argentina, and a game that lets you color a Kabuki theater.

A story activity provides bilingual multiple-choice story sketching, but it is limited to only five panels. The songs are brief and monolingual, and though the songs are likable, translations would be helpful. A dictionary sits at the bottom of the screen for easy reference, but vocabulary in each language is limited to around 30 words, plus numbers.

While the character of Timmy is engaging and encouraging, and the music is excellent, *Travel the World with Timmy* provides only a very basic introduction to how another language sounds and looks and is probably best suited for a younger set.

— Anne Marie Feld

Learn to Program BASIC



\$35, Interplay Productions
714-553-6655
www.interplay.com
Junior high school level
PowerPC required

Interplay Productions' *Learn to Program BASIC (LTPB)* takes the wacky approach to programming. For many kids, that will work fine. Others may consider the bright colors and frenetic characters that populate this tutorial to be insufferable. I'm trying to maintain the neutral ground. Certainly the approach of using madcap cartoon personalities to teach a serious topic is tried and true — in fact, I still think back to an instructional film starring Mickey Mouse and Goofy whenever I play billiards.

LTPB's zany host is the wide-eyed and twitchy Media Man, who shows up at various points in the learning process to give programming tips in a high, crackly voice.

He has a CD-ROM for a head and usually wears brightly colored clothing. At times he is garbed in unlikely getups (such as a surgeon holding a pulsating brain) and speaks with

a "humorous" foreign accent. It seems as though Media Man is desperately trying to garner street credibility among the young toughs that he is certain would jeer at him unmercifully under normal circumstances.

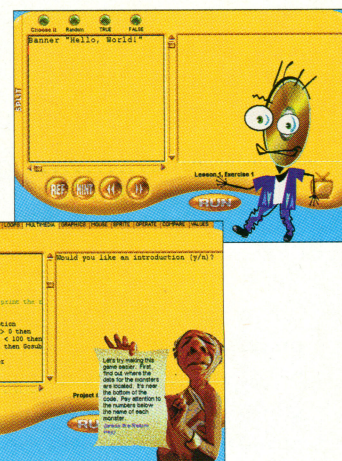
In addition to Media Man, *LTPB* is bolstered by funny little graphics and voices that crop up to reinforce the concepts of BASIC. Again, some kids will find these amusing in the same manner as *You Don't Know Jack*'s running commentary; others will want to turn the sound off.

But that would be a mistake, because despite Media Man's borderline-annoying personality, he actually explains the concepts of BASIC pretty well. BASIC (Beginner's All-purpose Symbolic Instruction Code) is rather a misnomer, say some computer experts, because it is actually more rigid than other forms of programming. Program structure is important in any language, but some others, such as C++ and Pascal, let programmers tweak the structure more than is possible in BASIC. Nonetheless, BASIC is designed for instruction, and many of the constructs can be used in more advanced languages. As the program explains, BASIC is a good gateway to the advanced methods used in creating impressive graphics and games.

The program has a pretty well designed interface that kids can use to explore lessons sequentially, skip ahead to an advanced concept, or use freestyle. It has a nice two-window design so you can view BASIC code in one window and see the results in another.

LTPB is a good deal for \$35, even if its overexcited approach isn't for everyone. It does its main task well — explaining programming concepts — and that's not trivial. Even if your kids outgrow it pretty quickly, this program can lead to great things.

— John Poultney



Wanna Bet?

For Better or Worse, Online Gambling Has Arrived

Who needs the jingle of slot machines? The dazzling lights? The smoked-filled casinos? When it comes to laying down bets, the Internet will do just fine, thank you, for a growing number of gamblers, who are turning their living rooms into virtual casinos.

Last year, some \$600 million in bets moved over Internet wires, and a number of online casinos are reporting growth of 125% per month. Make no mistake about it, say the analysts, Internet gambling has arrived. "Online gambling has the potential to dwarf other interactive services, tapping into an existing traditional gambling market valued at over \$700 billion in Europe and the United States alone," said Steve Morrell, an analyst with Datamonitor, a market research firm with offices in London and New York City.

But some fairly significant questions remain unanswered about this growing online phenomenon. Is Internet gambling legal? Are you liable for debts incurred while playing blackjack online? And most important, are online gamblers setting themselves up for a not-so-virtual rip-off?

One thing is sure: You'd be well advised not to bet on any of these questions. That's because gambling sites on the Internet are like frontier towns without sheriffs. As of now, anything goes, pardner. Take, for example, the case of Cynthia Haines from the San Francisco Bay Area. Haines racked up more than \$70,000 in online gam-

bling losses charged to credit cards.

When the credit card companies and casinos sued for collection, Haines sued right back, claiming that the debts are not collectible because gambling is illegal in California and online wagering is illegal in the United States.

The case is still in court, but if Haines's lawsuit is successful, it could be a major blow to the Internet gambling industry, according to I. Nelson Rose, a Whittier College law professor and American Bar Association expert on gambling law.

"Other payment types are too slow," Rose said. "Without credit cards, online gambling is doomed."

Big Stakes

But online casino operators don't seem worried about Haines's case or any other potential impediment; they're

building gambling empires with dizzying speed. And who can blame them? It's estimated that more than \$10 billion will be gambled online by 2002 as operators take advantage of the huge audience reach and cost savings of the Internet, according to Datamonitor. "Casinos, lotteries, and sports books dominate the new market,

allowing customers with an Internet connection and a credit card to gamble literally anywhere in the world," said Morrell. Online gambling revenues are expected to top \$955 million this year, \$2.3 billion by 2000, and \$3 billion by 2002.



Online Gambling FAQ

Q: Are online casinos legitimate?

A: Most Internet casinos are located outside the United States. They are generally licensed in the country they are in and report to their local governments to varying degrees. Most are stationed in Antigua, Curacao, St. Kitts, Grenada, the Dominican Republic, Gibraltar, and the Cook Islands, though most of the companies that oversee offshore casinos operate from the United States — only the servers are offshore.

Q: Are there differences among casinos?

A: Internet casinos are grouped in three general categories. The first requires you to download free Mac or Windows programs. These casinos are usually the most fun to play, but they require you to load up your hard drive with their software. Once installed, these programs typically offer the best graphics, sound, and animation.

The second type of casino uses Java instead of a downloaded program. These Java applets run through your browser. Some of these casinos offer sound and animation, and all offer fairly good graphics.

The third kind of Internet casino uses all HTML and does not require you to download software. These casinos can't match the sound and animation of the other online casinos, but the games are the same.

Q: Is online gambling safe?

A: The online gaming industry is working hard and fast to legitimize itself, according to experts, for one good reason: profits. In some countries, gambling operations are guaranteed by big international accounting firms. Additionally, most casinos and sports books use secure servers to conduct all of their transactions, and all information about bettors is held offline.

Q: How do I collect my winnings?

A: Casinos operate on the account system — you send them money, usually via credit card, and your account is credited for that amount. As you gamble, money is credited or debited as you win or lose. If you win more than your original deposit, a check for the winnings is mailed to you.

Q: Are the odds better or worse than they are with real casinos?

A: Unless someone is stacking the electronic deck, the odds for single-deck blackjack, baccarat, and roulette are the same with an Internet casino as with the real thing. As for the gaming machines (such as slots and video poker), the player payout percentages are determined by the casino, and many will post what the percentage of payout is online.

Not surprisingly, online casinos are springing up like billboards on the road to Las Vegas. At least 250 Websites now offer some form of wagering to online users — slots, blackjack, roulette, keno, poker, you name it — all with little or no United States government regulation.

That's because Internet gambling is primarily regulated by the antiquated 1961 Interstate Wireline Act, which makes it illegal for operators to offer or take bets from gamblers over phone lines or through other wired devices unless otherwise authorized by a particular state. But does the Wireline Act cover the Internet? How about cable modems or satellite-based transmission? And does the law prohibit gamblers from placing bets with casinos set up offshore, as most are?

These questions led Republican Senator Jon Kyl of Arizona to introduce a bill in 1998 known as the Internet Gambling Prohibition Act. The bill was designed to ban online gambling and impose penalties on bettors and operators. The Senate passed the bill by an overwhelming majority — 90 to 10 — but the bill died in the House for a variety of reasons. The "Kyl Bill," as it's called, is expected to be back on the table this year.

But the bill will face fierce opposition from some unlikely bed partners, such as the American Civil Liberties Union and the online gaming lobby. "As history has demonstrated, prohibitions do not work," said Sue Schneider, chairman of the Interactive Gaming Council, during testimony to Congress last year.

Internet gaming entrepreneurs are betting that time and technology — in addition to history — are on their side. "In short, with almost 15% of the world's recognized governments accepting interactive wagering, it is difficult, if not impossible, for a single free and democratic nation to build an electronic wall that keeps its citizens from betting online," said Alan Schneider, executive director of the Interactive Gaming Council.

There's also the question of popular opinion. A recent *Washington Post* poll found that 61% of respondents said that Internet gambling should be legal. With the federal government reluctant to regulate online gambling, it's up to individual states to enact laws, which makes for an ever more confusing online landscape. "Technology has made long-distance communication so easy," said Rose, "that state boundaries seem like noth-

At least 250
Websites now offer
some form of wager-
ing to online users
— slots, blackjack,
roulette, keno,
poker, you name it.



High stakes await high rollers on online casinos like Galaxiworld, shown here.

ing more than lines on a map.”

Lines on a map they may be, but many state governments contend that if they can prove that a site is targeting their residents, their courts should have jurisdiction over the matter. Casino operators counter that their practices are legal in the countries in which they operate and are, therefore, unaffected by United States laws.

The online gambling war is being fought on another front as well. The Indian Gaming Regulatory Act of 1988 exempts Indian tribes from federal gambling statutes. And since tribes contend that they are sovereign entities, they are subsequently independent of laws made by particular states. That didn't stop the state of Missouri from suing the Coeur d'Alene tribe of Idaho in 1997, however, claiming the tribe's online lottery violated Missouri laws that prohibit offering betting services to state citizens. The matter is still tied up in courts.

Place Your Bets?

Which brings us again to the most pertinent question: Is it illegal for you to gamble over the Internet? The answer is a definite ... maybe. Internet gambling has been officially outlawed in only two states, Nevada and Louisiana, according to Rose. Not surprisingly, both states have significant revenue coming from gambling interests. Nevada made it illegal for residents to gamble online, but not for Nevada operators to accept wagers

from outside the state. In Louisiana, the law makes it a crime to gamble by computer. Federally, the persnickety question has been handed over to the congressionally authorized National

Castro first suggested that Internet gaming could operate in controlled places, such as off-track-betting parlors, where the amount of money bet could be controlled and taxes collected. Castro's second option would be to require Internet gaming companies and their clients to connect through a government-owned computer system so that the authorities could monitor

the wagering.

Another scenario he described would allow an open system in which bettors and game providers would be licensed but could interact with limited interference from the government.

Finally, Castro said, government officials could outlaw the industry altogether. But will they? Should they? Can they?

At this point it's anyone's guess. Meanwhile, the continued explosive growth of online gambling is the only sure bet. **VIII**



Gambling Impact Study Commission, a group created to advise Congress on what to do about online gambling — and its potential to create billions in tax revenues.

The hearings officially began in December 1998 over the Internet, appropriately enough, via a video-conference comprising Internet gaming advocates and opponents, computer technology consultants, Internet attorneys, and state attorneys general.

Eric Goldman, a California Internet attorney, told the Commission that he thinks it is possible to regulate Internet gaming, but warned it should not infringe on people's right to free speech. "I personally believe that electronic communications related to gambling can be regulated under the First Amendment," Goldman said. "But only if the regulations can be drawn narrowly and very precisely in order to avoid the chilling effects that could occur."

Manny Castro, a Florida computer technology consultant, provided the commission with four options for regulating Internet gaming, including outright prohibition of the industry.

The Virtual Strip: Gambling Sites on the Internet

Online gambling directories

www.wheretobet.com
www.gambling.com

Casinos requiring no downloads

www.starluck.com
www.granddominican.com
www.oasiscasino.com
www.galaxiworld.com

Downloadable online casinos

www.goldclubcasino.com
www.goldenpalace.com
www.tradewindscasino.com

Online lotteries

www.pluslotto.com

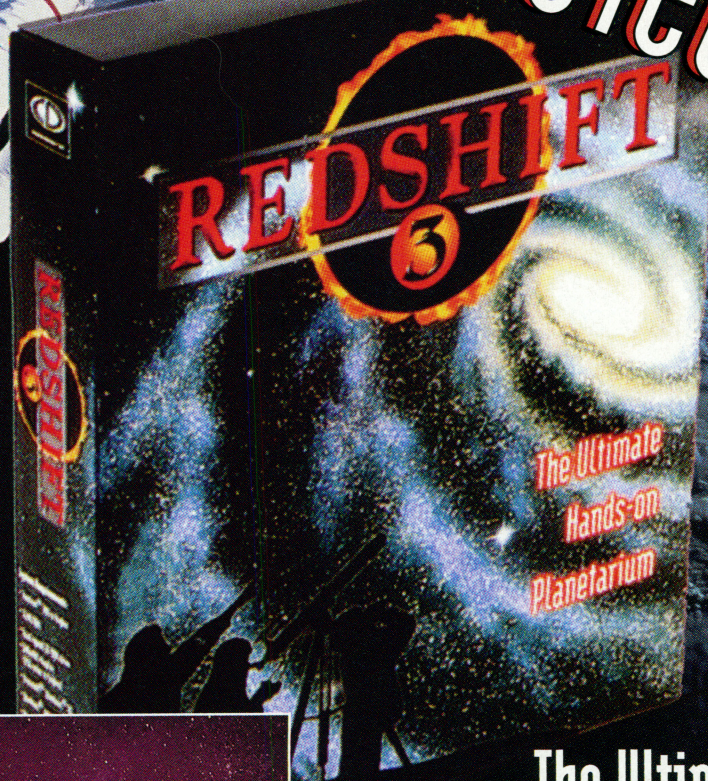
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— *Computer Gaming World*

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www.redshift3.com

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Special Report

Apple Kicks Gaming Ass at Macworld Expo 1999

Things are looking (way) up for Mac gamers: iCEO Steve Jobs carefully reiterated Apple's commitment to the games market during the keynote address at January's Macworld Expo, resulting in optimistic to feverish reactions on the part of developers and gamers.

This is in sharp contrast to the emotional valley experienced by game lovers at Macworld just a year ago, where feelings ranged from the sorely downtrodden to the suicidal.

Jobs announced an even dozen new games, released or scheduled to be released within 120 days of the Expo. Sequels were the order du jour: Titles included *Tomb Raider III*, *Myth II*, *Sim City 3000*, *Fly!*, *Tom Clancy's Rainbow 6*, *Imperialism II*, *Starcraft*, *Heretic II*, *Battlezone*, *Quest for Glory*, *Age of Empires*, and *Quake III*.

Apple is backing up the hard sell with hardware, showing gamers that they mean business with the new G3s. With built-in ATI Rage 128 graphics acceleration and support for Silicon Graphics' Open GL 3D graphics standard, which industry insiders say will soon be the new standard for high-end gaming, the G3 is finally a first-rate gaming machine.

Graphics quality aside, Open GL means that porting a PC game to the Macintosh will no longer require developers to rewrite the code from scratch. In an online statement, John Carmack, cofounder and CEO of id Software, wrote, "My first weekend of effort had *Quake III Arena* limping along while held together with duct tape, but week-

end number two had it properly playable, and weekend number three had it brought up to full feature compatibility." This is *very* good news for Mac gamers.

Carmack, looking like a teenager with a backstage pass at a Metallica concert, also spoke at the Macworld keynote, announcing that he owed his presence there to the fact that "Apple finally has its act together [in terms of gaming]." He demonstrated id's upcoming *Quake III Arena* (the follow-up to the blockbuster *Quake*) which will be released simultaneously on the Mac, PC, and Linux platforms, and commented that the Mac has become "an absolutely perfect gaming platform."

It wasn't however, a Carmack/Apple lovefest; he had the following advice for gamers: "Pull out that silly one-button mouse and plug in a three-button mouse." You can't have everything. On a side note, *Quake III Arena* will be the first shooter to lack a single-player mode: id's developers focused instead on honing the multiplayer death match aspects of the game.

But the real kicker of the gaming portion of the keynote was Jobs's announcement of Connectix's new Virtual Game Station, a software-only version of Sony's widespread PlayStation console

system. The Connectix booth, where they were selling the title for \$49, was swamped throughout the show.

In a statement, Connectix CEO Roy McDonald said the emulator was "not a perfect substitute for PlayStation consoles," but that gamers should be pleased with the experience. And with the exception of a few dropped frames, the software ran swimmingly during Jobs' demo. Reports published online have found no issues with frame dropping, and a one-on-one demo that McDonald gave *MacHome* was decidedly smooth.

Unless Sony mounts a legal challenge, the emulator is poised to do wonders for the Mac's gaming potential. McDonald seemed unfazed by the media-giants litigious bent (according to industry rumors, Sony's legal department actually turns a profit) commenting that, "We're experts in intellectual property law."

Virtual Game Station works with all ADB and USB hardware, but the software doesn't run every PlayStation title. Connectix is maintaining a list of compatible titles online at www.virtualgamestation.com.

All told, there was only one dark cloud hanging over the gaming pavilion at Macworld: Gamers and developers planning to take advantage of the mezzanine slot on the iMac with graphics accelerator hardware solutions will be disappointed in Revision C of the iMac, which no longer sports the controversial slot. That makes the G3 the only real choice for the hard-core Mac game enthusiast. ■



Quest for Glory V: Dragon Fire



\$49, Sierra On-Line

800-757-7707

www.sierra.com

PowerPC required

So you wanna be a hero? Sierra has given the Macintosh gaming community one of the best adventure games in years in the form of *Quest for Glory V: Dragon Fire*, the conclusion to the series of games that Sierra has been publishing almost since its infancy. Although this is only the third *Quest for Glory* to make it to the Mac, it has been well worth the wait.

Quest for Glory veterans will be familiar with the premise: The player chooses from three types of characters (thief, magician, or warrior) and makes that character the hero. When *Quest for Glory* debuted back in the late 1980s, its format was unprecedented. Never before had a game taken the role-playing premise and used it in an adventure game. For the first time, players were able to customize their heroes; game play became richer and more complicated, and games were different each time you played them.

As adventure gaming has grown, so has Sierra. But the company has strayed from the adventure-game genre in recent years (*King's Quest 8* now looks like *Quake*), and many have forgotten what it was like to play a really well-made adventure. *Quest for Glory V: Dragon Fire* doesn't try any new stunts. It doesn't trick you with any new interfaces. *Dragon Fire* simply presents the next logical step in the game. For the first time in years, I felt a sense of exhilaration when I began playing *Dragon Fire*, a feeling that I have not had since *Myst*. The graphics are simply spectacular, the story is compelling, and best of all, everything people loved about the earlier incarnations of the series has been faithfully preserved. Players will still be able to import their characters from any *Quest for Glory* game (PC or Mac), and they can count on a long, challenging game that does more than look nice: It's infinitely playable.

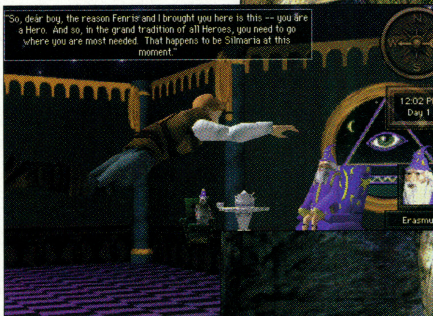
Dragon Fire finds the hero in Silmaria, a land that was once serene and prosperous. Evil forces have brought an end to that, however. The king has been killed, and a mythological dragon has risen from its grave to wreak havoc on the quiet kingdom. The hero arrives highly recommended from several kingdoms (whom you've rescued in previous games) and rises to the task of vanquishing evil once more.

Possibly the most beautiful adventure game that Sierra has ever published, *Dragon Fire* feels quite literally like a movie at times. The sound rings through beautifully with external speakers (and preferably a subwoofer); the characters are some of the most lifelike and smooth 3D renderings this reviewer has seen to date. As for difficulty, the game will challenge seasoned adventure gamers, but new players will also be able to progress in the story with some work (the beginning is the easiest part of the game, allowing newcomers to learn).

We had few problems playing the game on a Power Macintosh 6500/300. Simply loading only game-necessary extensions rectified the occasional glitch. On the downside, the game requires an inordinate amount of hard disk space to play well (more than 300MB), but if you can afford the space, *Dragon Fire* is worth it.

Possibly the best adventure game to leave the Sierra doors since *King's Quest VI* or perhaps even *Space Quest III*, *Dragon Fire* proves that Sierra's Oakhurst division (Yosemite Entertainment, the original headquarters of the company, founded by Ken Williams) is more than simply aware of its beginnings. It proves that the division can still make adventure games, and make them with style. Many Mac gamers will agree that we've had enough first-person shooters by now, and we are once again ready to step back into the familiar 3D adventure: *Quest for Glory V: Dragon Fire*.

— Rafi Guroian



Slithereens



\$20, Ambrosia Software
716-325-1910
www.ambrosiasw.com

"Eat me," says the voice-over on *Slithereens* when your snake is consumed by another and turned into ash. It's an eat-or-be-eaten, snake-eat-snake world out there in Ambrosia Software's latest title, *Slithereens*. The title is shareware: Download the demo version from the company's Website, play it free for thirty days, then pay the \$20 and gain access to the rest of the levels and the Help function.

Slithereens is an arcade-style game, something of a mix of *Centipede* and *Pac-Man*. It takes about 20



seconds to learn how to play: Chase around other snakes, gobbling them up (by the tail if they're bigger than you, or head on if they're smaller) before they eat you. Sound like American politics to anyone else?

Rats, mice, and birds appear for you to eat so you can gain strength and length. Other snakes lay eggs, which make you stronger and longer if you eat them, only there's a trade-off: You get slower as well. The fun, fast-paced game is played against a labyrinthine backdrop, which doesn't change much from level to level, but the action is all about where the other snakes are, so it doesn't matter much.

Game play speeds up and the snakes get meaner as you progress to other levels, 40 in all. Player modes include single-player, two-player competitive, and two-player cooperative.

There's a good sound track, with a fair amount of variety, and the occasional commentary is often funny — eat an egg, and the narrator purrs, "Mmmmm, tastes like chicken," though this might get tired fast.

My only advice is to use two fingers on the arrow keys, don't stay still, skirt around the edges when you can, and stay hungry.

— Anne Marie Feld

Yoot Tower



\$40, Sega PC
650-508-2800
www.sega.com
PowerPC required

I have one major problem with *Yoot Tower*. I can't stop playing it.

Developed for the Mac first by Yoot Saito, creator of *Sim Tower*, *Yoot Tower* is the next step in sim games. All of the usual sim suspects are there: resource management, planning — which admittedly sounds dull. Very dull. But it's not.

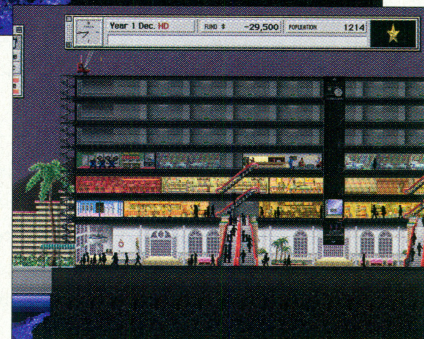
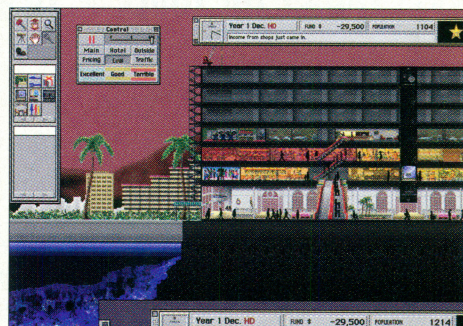
In *Yoot Tower*, you're given a choice of settings: Tokyo, Waikiki, and Kegon Falls, a tourist destination. To keep things interesting, Saito has introduced some random elements: terrorist attacks, fires, and visits from VIP guests. These guests have the power to increase the ratings of your building. They may take a long time to show up: The king that finally visited my hotel did so at year 15, 12 hours into a game. But for me, these elements just felt like interruptions. All I really wanted to do was make money and do construction. Suddenly, Donald Trump was my hero.

You can leave *Yoot Tower* running in the background while you do other things, but it takes up 23MB of RAM, so it'll be a challenge for memory-strapped systems. The advantage to this, however, is that you're making money while you're not looking — a year can pass in an hour, and if you've planned well, the money piles up fast.

It's not all perfect: Although the program does an excellent job of showing you how the various areas of your tower are functioning, there isn't enough room to tweak the controls. Restaurants serve what they want to serve, and the most control you get in your shops is a choice of how much of four preselected items you stock in each. In BCD, the Hawaiian convenience store, all I got to choose from were minerals, nuts, T-shirts, and beach goods. When was the last time you saw a hunk of rose quartz in a convenience store? It didn't do well next to my movie theater. Nice touch with the theater — you get to select the movies, and while they're running, you can look at a short excerpt from the film. Other nice touches include a microphone effect: Click on the shadowy black figures scurrying around the tower, and a cartoonlike bubble appears over their heads with their thoughts. Usually it's something like, "I have a lower back pain," or "I'm hungry," but occasionally it wanders into the really bizarre: One patron said, "My teeth are floating." Hmmm.

Fans of and newcomers to sim games will enjoy this game. Perhaps, like me, a little too much.

— Anne Marie Feld



Flying Circus



\$60, Bullseye Software

702-831-2523

www.dogfightcity.com

PowerPC required

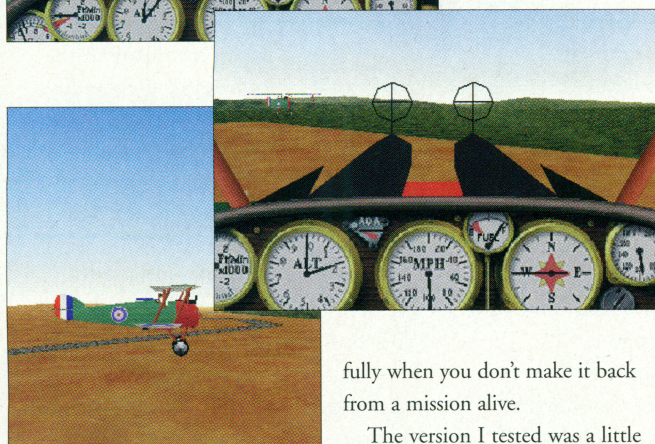
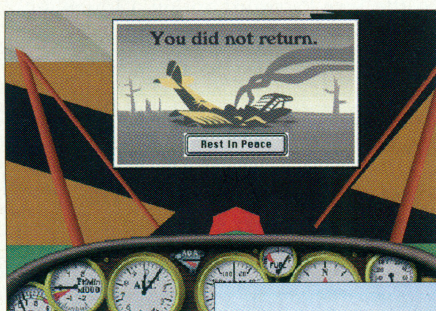
Flight sims are notorious for taking a long time to master, and Bullseye's *Flying Circus* is no exception. The only advantage it offers over flight sims such as *Top Gun* is that its World War I planes are simpler and therefore a little easier to master. Don't expect to be flying along blithely shooting things at will very quickly, however.

Participating in a full-on dogfight requires hair-trigger control over a combination of more than a dozen elements. The story line is what you'd expect: The Allies fight the Central Powers. In short, kill the Germans. The game cuts a wide swath. There are 20 missions in all, over a range of terrain. Hint: Watch out when flying low over muddy areas. There are soldiers down there ready to take a shot at you.

When you're flying without the assistance of a 3D-acceleration card, things have rather sharp edges. The game's manufacturer recommends using a card — effects such as fog and haze won't even show up without one.

A lot of variety is built into the game. There's a healthy selection of aircraft, and you can create your own scenarios, custom-paint your plane, and

participate in network play with up to six others. Sound is adequate; engine noise is realistic, as is the sound of crashing, and there's even a little song that plays mourn-



fully when you don't make it back from a mission alive.

The version I tested was a little buggy. After I crashed and burned

my Sopwith Camel, for instance, I got a message that said "Mission Accomplished," followed immediately by "Rest in Peace." Also, instructions reside on the disc — not great for a game that requires mastery of complex controls.

Flying Circus is not likely to wow you the way something such as *F/A-18 Korea* might, but World War I fans and those who are just starting out with flight sims might find quite a bit in *Flying Circus* to keep them occupied.

— Anne Marie Feld

Up to the Himalayas, Kingdoms in the Clouds



\$40, DNA Software

604-730-0306

www.dna.bc.ca

You can use this classy, well-designed software two ways: as an adventure game, or as an educational experience. The game's backbone is the mystery of the Buddhist scholar Lama Dorje's lost manuscript, which contains clues to his current incarnation (he recently passed away). The script was ripped apart by the wind and scattered about the Himalayas. You follow clues, listen in on interviews with locals, decipher encoded scripts, and move mountains until you find objects that belonged to Lama Dorje, gaining the knowledge necessary to become a monk.

First you must take an exam to see if you possess infinite wisdom, answering 30 questions about the Himalayas, the people of the region, and their practices. If you pass (and it's not easy), you become a member of the Council of High Lamas and are given the secret clues to help you along in your "journey of discovery."

If the game doesn't interest you or seems too challenging at first, you can simply explore the disc with its detailed information about the area. (All the answers to the questions posed in the exam are hidden there.)

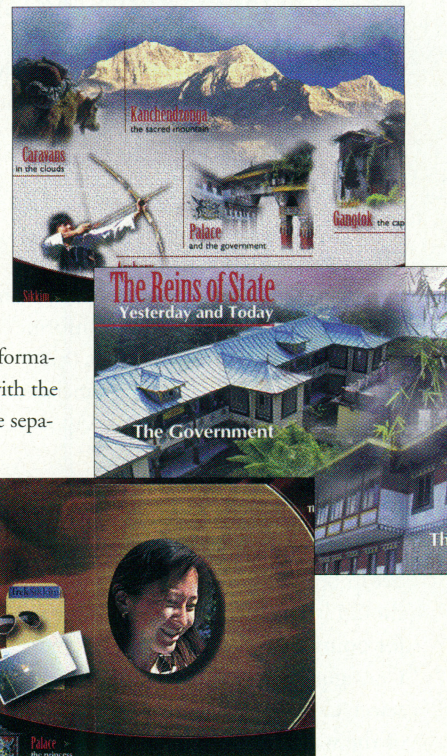
There are short films, texts, voice-overs, and information on and interviews with the royal family. Many of the separate areas have a narrator who guides you, putting modern faces and personalities on the past and present of this region.

The leaping-off point for the interviews is beautifully articulated. The

Sikkim Directory is a graphic overview, anchored by an eight-armed deity in the lower right-hand corner. She's present in most screens to take you to specific options: Sikkim Directory, Contents, Map, Diary, Book of Wisdom, and Quit. Sound effects are excellent, and most of the time there is musical accompaniment — chants from monks, and other music of the region.

I found the information more engaging than the game, but either way, anyone who's interested in that region of the world will find *Up to the Himalayas, Kingdoms in the Clouds* a fascinating place to visit.

— Anne Marie Feld



Do-It-Yourself Internet

Connect to the Internet Without Assistants

Connecting to the Internet for the first time is often a teeth-clenching, nail-biting task. To change that, Apple and many Internet service providers (ISPs) have attempted to simplify the procedure with setup assistants that let you enter the particulars of your Internet account all at once.

With this procedure, however, you don't learn anything. If you need to change your Internet configuration or you run into connection problems, you'll need to run the setup assistants all over again.

Fill In the Blanks

To set up your own Internet connection, you need several key pieces of information from your ISP. You'll enter this information in three control panels: TCP/IP, Modem, and Remote Access.

When you open the TCP/IP (Transmission Control Protocol/Internet Protocol) control panel, you'll see a pop-up menu at the top, sitting above the Setup box. The Connect Via menu should be set to PPP (an abbreviation for point-to-point protocol). In the Configure pop-up menu, you should select Using PPP Server. At the bottom of the window, you'll see two white boxes. In the box to the left, enter the numeric Name Server Address provided to you by your ISP; you may get one, two, or three strings of numbers. In the box to the right, you can opt to enter your ISP's domain name.

In the Modem control panel, the Connect Via pop-up menu asks you to select the port to which your modem is connected. Most users should choose Modem Port, though iMac and

PowerBook users should choose Internal Modem. Within the Setup box, you'll see a Modem pop-up menu. Here you can select your specific model of modem. This is an extremely important task, as it tells the operating system what script to use to speak to your modem. If you do not see your modem listed, you'll need to find a modem script specific to your model. Search through the software that came with your modem; if you cannot find it, check the manufacturer's Website. But if you don't have the right script, how do you connect? Pick Hayes Compatible from the list of modems; it should allow your modem to work, though not at its best.

The Modem control panel allows you to turn off your modem's sound. The "Ignore dial tone" option is helpful if you have a call-answering feature on your phone that modifies the dial tone. This modified dial tone can confuse your modem; because the tones do not match the tones it expects to hear, it will assume there is no dial tone at all.

In the Remote Access (or PPP, in Mac OS 8.1 or earlier) control panel, make sure the caret next to Setup is pointing

down, revealing the Setup box. Because you have your own Internet account, make sure the Registered User radio button is selected. In the Name field below, enter your account name. Note that this often is not your entire e-mail address, but rather just the part of it up to the @. Next, enter your account password. It's probably best to click on the Save Password option. Otherwise, you'll be prompted to enter your

password every time you connect. The last and perhaps most crucial information is your ISP's telephone access number. If you have call waiting, add *70 before the number.

Next, click on the Options button at the bottom of the window, and click on the Connection tab. By default, an icon will flash in the menu bar to let you know you

are connected to the Internet.

Farther down, you'll see the option to "Disconnect if idle for X minutes." Raise this value to 20 or 30 minutes — otherwise you might find you are automatically disconnected from the Internet while reading an article on the Web or taking time out for a phone call.

Liberation!

Knowing how to set up an Internet connection without assistance liberates you from long waits on ISP help lines and allows you to help get your friends connected, too. ■■■



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MHJ

AppleCD Audio Player

The AppleCD Audio Player provides several more options than the CD Control Strip module. You may already know that AppleCD Audio Player lets you play tracks randomly or program a specific sequence of tracks to play. You might not know, however, that you can actually enter the titles of a CD and each of its tracks into the application. A waste of time, you might say, seeing as your CD

reader can't possibly write that information to the CD. Won't it be lost the moment you eject the CD? Not at all. AppleCD Audio Player examines each audio CD inserted, making a note of the number of tracks and length of each track. This is the CD's fingerprint — it's extremely unlikely that any two CDs will have the exact same track configuration. When you enter the CD and track titles, AppleCD Audio Player saves that

data along with the track configuration. When you play that same CD later, AppleCD Audio Player looks at its track configuration and cross references it with the information it has on file. If it finds a perfect match, it loads the proper track titles from its database and displays them. Very cool.



Mac OS 8.5.1

Apple has released an update that addresses serious bugs in Mac OS 8.5. The Mac OS 8.5.1 update is principally aimed at users who experienced hard drive problems after installing Mac OS 8.5. Flaws in Mac OS 8.5's Drive Setup utility caused some Macintosh hard drives to become unreliable, resulting in corrupted files and data loss. The Mac OS 8.5.1 update dramatically reduces this problem.

The Mac OS 8.5.1 update incorporates several additional bug fixes and enhancements, including improved Sherlock performance and a fix for an AppleScript memory leak. The update also re-enables the use of some third-party ADB devices rendered inoperable by Mac OS 8.5.

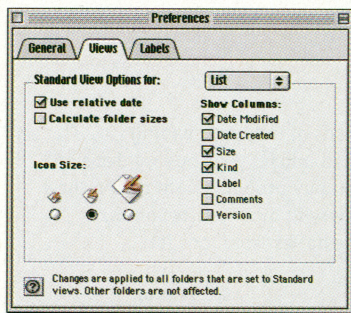
If you've installed Mac OS 8.5, you should install this update. Although you may not be experiencing any hard drive problems now, it is better to be safe than sorry. The Mac OS 8.5.1 update is available at www.apple.com/support.

Finder List Views

Mac OS 8.x displays the contents of Finder folders in one of three ways: as icons, as buttons, or as a list. With its wealth of organizational options, the list view is extremely useful for folders containing many items. You can change the way folder items are listed by clicking on one of the window's header buttons. For example, to view the list by date, click on the Date Modified header. The folder contents are instantly reorganized by their modification dates.

The default setting for Finder list views includes header buttons for Name, Date Modified, Size, and Kind. However, if you select Preferences from the Finder's Edit menu in Mac OS 8.5 and click on the Views tab, you'll find additional list view options. (In Mac OS 8 or OS 8.1, select View Options from the View menu.) You can add header buttons for Date Created, Label, Comments, and Version.

A header button at the far right (the lined triangle) controls the direction in which the list flows. When the triangle points up, content flows normally: alphabetically, chronologically (most recent at top), or from largest to smallest. When the triangle points down, content flows in the opposite order, such as smallest to largest. Either way, you can organize your folders so that it's easy to find the files you need.



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One-Click Websites

One of Netscape Communicator 4.5's best features is its customizable Personal Toolbar. Communicator conveniently allows you to add Internet addresses to the toolbar for quick, one-click access. No longer must you type in the full Internet address when you want to go to a specific Website — in fact, you don't even have to scroll down the Bookmarks menu and select a favorite destination. Now, you can simply click the link on the Personal Toolbar and you're off and running.

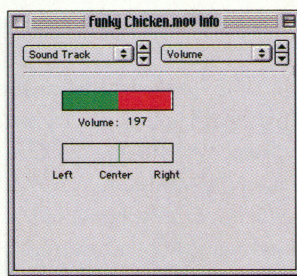
To add items to the Personal Toolbar, select Edit Bookmarks from the Bookmarks menu. In the window that appears, you'll see a small folder named Personal Toolbar. Double-click on the folder to reveal its contents. Now, select New Bookmark from the file menu. Give your bookmark a name, and then enter the full Internet address in the line below. Close both windows and return to any open Communicator window — you'll then see that your bookmark has appeared in the toolbar!

Give each bookmark a short, identifiable name. This will allow you to maximize the number of bookmarks you can place in the toolbar. You can also select bookmarks in other folders and drag them to the Personal Toolbar folder, saving you the hassle of re-entering bookmarks you might already have.

Movie Audio Too Low?

Have you ever downloaded a QuickTime movie and discovered that its audio is far too quiet, even with your speakers turned all the way up? You can easily amplify movie audio with MoviePlayer 3.0 Pro. Open the movie and select Get Info from the Movie menu. In the window that appears, you'll see two pop-up menus. Select Sound Track from the left-hand menu. Next, select Volume from the right-hand menu. You can then adjust the movie's regular volume by clicking in the Volume box (below the menus), which is half-filled with a green bar. The increase is represented by a red addition to the green bar. When you're finished adjusting the volume, close the Get Info window, and save. The next time you play the movie, you'll appreciate the increased volume.

MoviePlayer 3.0 Pro is a component of QuickTime 3.0 Pro. The \$30 QuickTime 3.0 Pro is included free with Mac OS 8.5.



Stay Connected

Apple Remote Access automatically disconnects you from the Internet after a specified period of inactivity (10 minutes by default). To lengthen the idle time before disconnection (or to turn off auto disconnection), open the Remote Access (PPP in OS 8.1 or earlier) control panel. Click the Options button, then the Connections tab. At the bottom of the window, you'll see the option, "Disconnect if idle for X minutes." Enter a value that is more suitable to Net-surfing, such as 30 minutes. This should minimize inconvenient disconnections.

share your tips!

Got some tips you'd like to share with your fellow MacHome readers? Please send them to:

chris @ machome.com

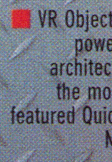
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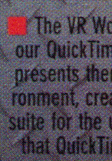
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back to basics

[You Ask, We Answer]

By Chris McVeigh

iMac vs. Epson 740, Bookmarks, Software-Damaged Hard Drive?

Q I am having trouble connecting my new Epson Stylus Color 740 printer to my new iMac. I get messages from the computer saying it cannot find the printer driver even after I have installed it from the CD that came with the printer. One thing that puzzles me is that the directions with the Epson 740 clearly say in words and pictures that I should use an 8-pin cable connection. However, my dealer gave me a rectangular connector, stating it was the correct cable to use with the iMac. What can I do?

William Williamson

A The sales clerk has given you the right advice; unfortunately, the driver software and instruction manual that came with your Epson 740 printer are a little bit behind the times.

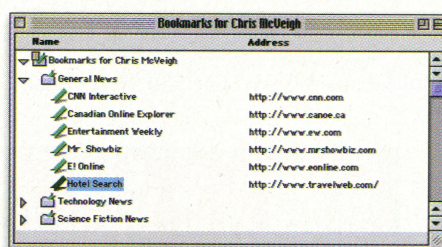
Apple incorporated a new expansion system into the iMac known as USB (Universal Serial Bus). Due to the inherent benefits of USB technology, Apple chose to omit the traditional 8-pin printer port from the iMac. Consequently, it is impossible to connect your Epson 740 to the iMac with anything but the USB cable provided to you by the sales clerk. However, the 740 itself does have both USB and the traditional Mac serial ports, so the printer can be used with other Macintoshes.

Your problem is easy to remedy. All you need are the updated printer drivers for the Epson 740, which allow it to function with the iMac. The update is available from Epson's Website: www.epson.com/support/pdcip_m.html.

Q I use Netscape Communicator to browse the Internet. Unfortunately, I've run into a bit of a problem. I like to add bookmarks when I find a site I like, but often, the links are only relevant for a week or two. Is there any way to remove bookmarks I no longer need? My bookmark menu seems a mile long now.

Bill Miller

A We all must eventually weed out unwanted bookmarks. It's a simple task. Select Edit Bookmarks from the Edit menu in Communicator. A window will appear, listing all of your bookmarks. To get rid of a bookmark, select it with a single click and press the Delete key on the keyboard. To remove several bookmarks at once, highlight a



series of bookmarks, or hold down the Shift key and click once on each bookmark you want to remove. When you have selected all the bookmarks you want to eliminate, simply press Delete. If you've accidentally erased an important bookmark, you can retrieve it by selecting Undo from the file menu.

Q The IDE hard drive on my Macintosh Performa 6300 recently died. I have an extended service policy

that I bought from a company other than Apple. The company refused to do a repair or replacement under the policy, saying that I had "damaged the hard drive by installing Mac OS 8.0." (I had upgraded to 8.0 more than six months before the hard drive failure.)

Is it possible to cause delayed physical damage to a hard drive by upgrading to Mac OS 8.0? If so, is there a software fix for this problem? The company holding the service policy insisted that there was such a fix, but it couldn't give me any details.

Anonymous

A It's specious to suggest the installation of Mac OS 8 caused irreparable damage to your hard drive that surfaced six months later. While the installation of Mac OS 8 can cause some unpredictable behavior with software, it cannot do any physical damage to your computer.

Mac OS 8 updates the driver that controls your hard drive. In very rare cases, updating the hard drive driver can lead to a hard drive failure that results in data corruption. However, it must be stressed that this type of failure would occur almost immediately, and certainly within 48 hours. To suggest that a problem of this type could occur more than six months after the installation is simply ridiculous. Moreover, you can usually replace a corrupted or unreliable hard drive driver and kick the hard drive back into shape by reinstalling the driver and reformatting the hard drive.

Your service provider owes you an explanation. If, as it claims, installation of

Mac OS 8 somehow caused your hard drive failure, the technicians should be able to remedy the problem by reformatting the hard drive. If, as it seems, your hard drive suffered a genuine physical failure, the company should honor its service policy and replace the hard drive. After all, you've paid for a service contract. Hard drive failures are exactly the kind of problem extended service policies are designed to address. If the service provider still refuses to honor your contract, report it to the Better Business Bureau in your area. Too often, extended service plans sold by third parties bear an uncomfortable resemblance to insurance scams that prey on the uninitiated.

Q I have a Power Macintosh 6500, and I've been unable to unscramble the instructions and dialog boxes to discover how to send a fax directly from my computer. Can you help?

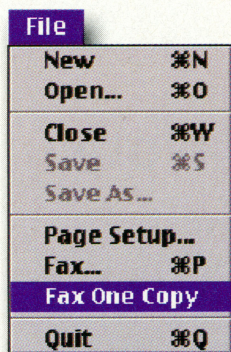
Ward Graham

A Despite their structural differences, all fax applications tend to work in the same manner. When you install fax software, a fax driver is installed into the Extensions folder. The fax driver works similarly to a printer driver; in fact, you select the fax as you would a printer.

Say, for example, you've created a document in Microsoft Word and you want to fax it off to a friend. Before you can send the document, you need to go to the Chooser. In the Chooser, you'll find a fax driver icon among the printer dri-

vers. Simply click on the fax icon to make faxing your default "printer." Once you close the Chooser, you'll be prompted to reconfigure your Page Setup. Now, when you return to Microsoft Word, you'll notice the Print option in the file menu has been

changed to Fax, and Page Setup is now Fax Setup. To fax the document, simply select Fax and fill out the form that



appears. Most fax software has some type of quick fax option, allowing you to enter the name and number without the hassle of configuring your fax address book. Eventually, however, it would be wise to become familiar with the fax application to avoid entering the same name and number over and over again.

Once you select the fax driver in the Chooser, the fax becomes your default printer. This means that no matter what application you are in, your Print command will have been supplanted by Fax. This is convenient if you fax a lot of documents. Most people, however, tend to fax incidentally. Having to go to the Chooser and reselect your printer driver when you want to print and your fax driver when you want to fax can become tedious. Thankfully, most fax software includes a simple work around. By holding down the Option key as you click on the File menu, you'll initiate the fax driver. You can scroll down and select Fax for one time only; the minute you fire off your fax, the menu reverts back to Print. **MM**

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MacHome

Creating a Small Network

The Ins and Outs of Mac Networking

The Macintosh has two networking protocols: the antiquated LocalTalk and the speedy Ethernet. Here's how to set them up for your particular situation.

Choosing a Network Type

LocalTalk operates via the printer port and has been included with Mac since the mid-'80s. However, every new Macintosh is now equipped with an Ethernet port. Ethernet has become the Mac networking protocol of choice due to its impressive speed — the slowest implementation cruises along at more than 40 times the speed of LocalTalk.

While speed is a very important factor, you'll also have to take into account the type of printer you own. There are now four different printer connection standards, and most printers only support one. Up until this year, almost all inkjets and some low-end laser printers designed for the Macintosh used a simple serial connection. Only a small number of these printers can be networked, and the ones that can often require a LocalTalk networking module. Most PostScript-capable laser printers employ the LocalTalk standard, though newer models almost always include an Ethernet port. Finally, there is the new USB standard, which unfortunately does not support networking.

There are a number of Ethernet-to-LocalTalk network adapters you can purchase to connect a LocalTalk printer to an Ethernet network. Another option: Many Apple inkjet printers can use a technology called Printer Share to share a standard serial printer over either a LocalTalk or Ethernet network. The printer is simply hooked to the printer

or modem port of one computer, and that computer becomes a print server.

Use a LocalTalk network if you simply want to share a printer between Macintoshes. You'll need to buy a LocalTalk adapter for each Macintosh and LocalTalk-capable printer on your network. The adapters are about \$15 each and simply plug into the Mac's printer port. Note that the iMac cannot be networked with LocalTalk, as it does not have a traditional printer port.

Opt for an Ethernet network if you can find a way to accommodate your printer. An Ethernet network is structured differently; instead of daisy-chaining one device to the next, all computers and printers on the network must be connected to a central Ethernet hub (\$75 or so), which routes data among them. You can add an Ethernet card to many older Macs for just \$75, allowing them to join the network.

If you only wish to link two Macs together, use a standard printer cable (8-pin serial) and plug it into the printer port of each Mac, creating a very simple LocalTalk network. However, you'll be unable to connect additional devices.

To create a simple Ethernet network without incurring the expense of an Ethernet hub, purchase a \$15 "crossover"

cable. Make sure the sales clerk at your computer store understands the cable you are looking for is a crossover or "gaming" cable, and not a standard 10BaseT Ethernet cable.

Finally Sharing

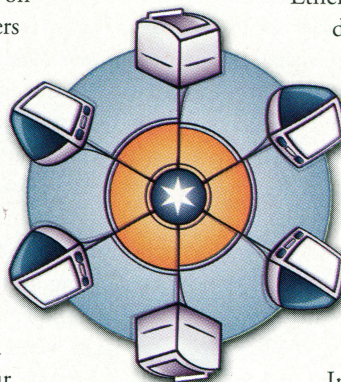
To prepare the computers for file sharing, go to the AppleTalk control panel on each Macintosh and select your networking port — either

Ethernet or Printer Port, depending on whether you're using Ethernet or LocalTalk, respectively.

Then, on the first Macintosh, go to the File Sharing control panel. Enter a name and password for the computer and click Start to start up file sharing.

In the Finder, highlight your hard drive icon and select Sharing ... from the file menu. Be sure the box next to Share This Item and its Contents is checked.

Head over to the second Macintosh and open the Chooser. Select AppleShare and double-click on the item that appears — it should be the name of the first Macintosh's hard drive. When the dialog box pops up, enter the name and password you previously assigned to that Mac and continue. An icon should appear in the Finder representing the first Macintosh. Double-click the icon to see the contents of your other hard drive and drag any files and folders you wish to access between the hard drives of both Macs. **III**



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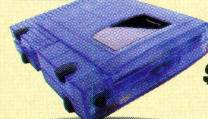
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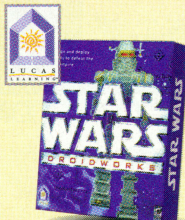


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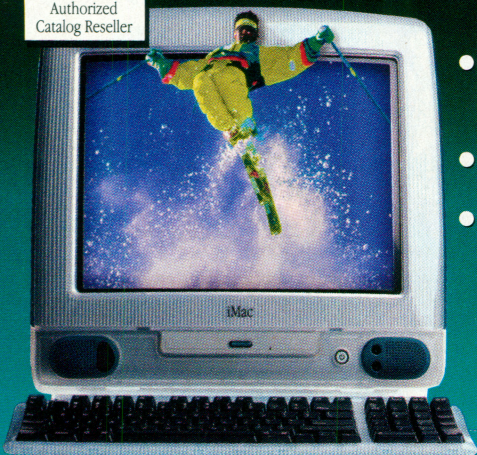
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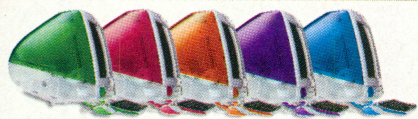
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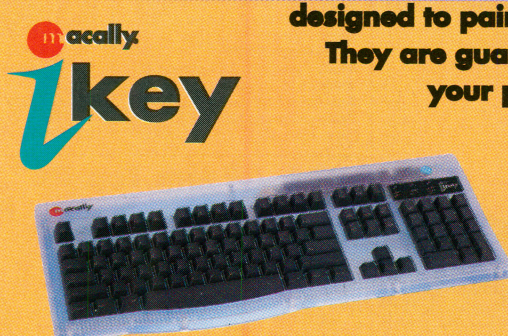


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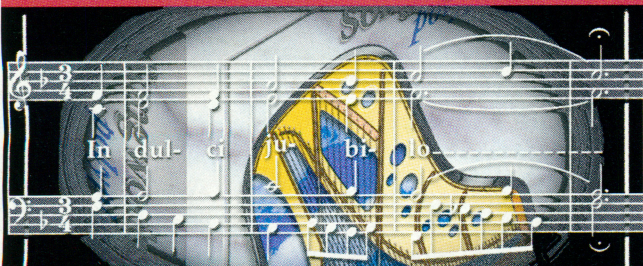
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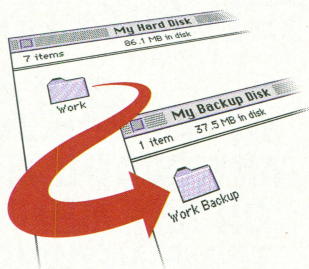
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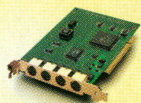
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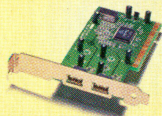


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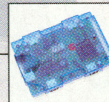
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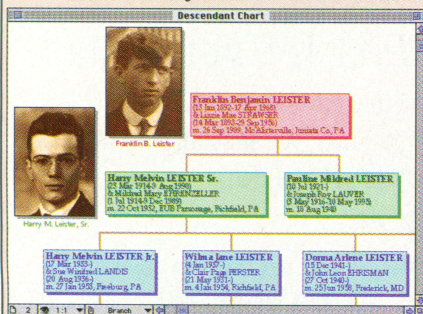
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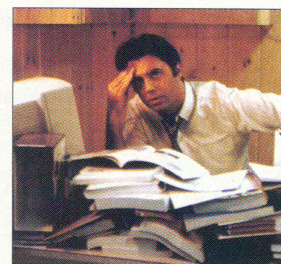
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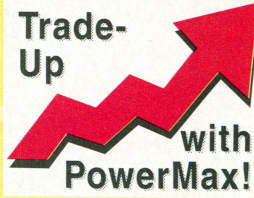
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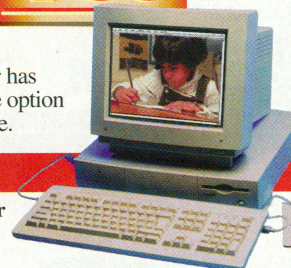
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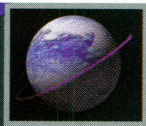
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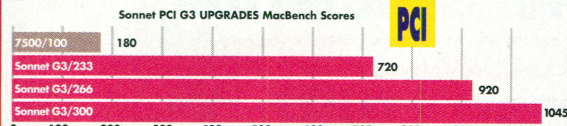


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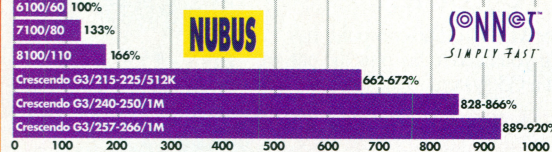


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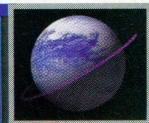
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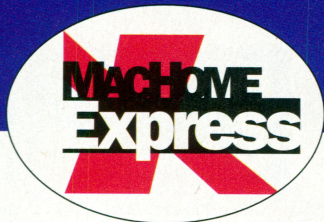
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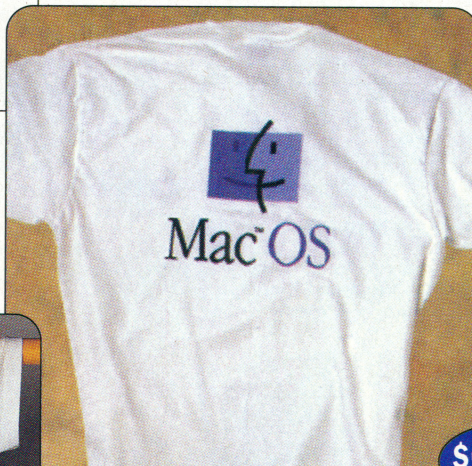
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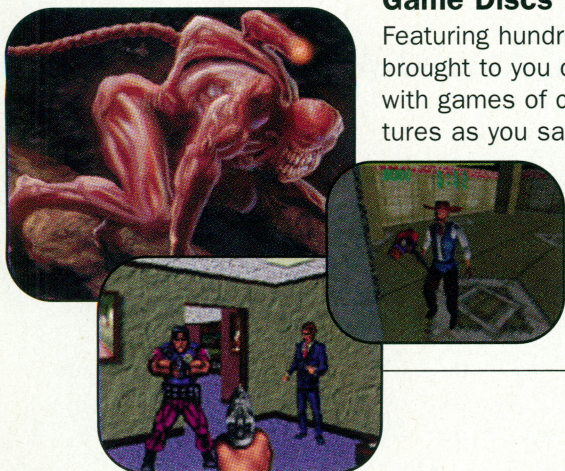
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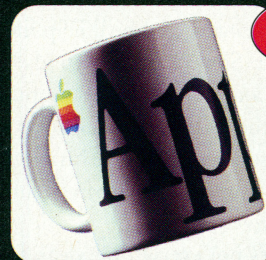
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By John Poultney

The Company You Keep

I Don't Like Those New Kids You're Hanging Around With

Remember in the old days, how your mom would sometimes disapprove of your friends? She said those kids were trouble, and if you were dumb enough to hang out with them you'd be in trouble too.

Let's apply that situation to Apple and its new friends, shall we? Only in this scenario, "Mom" will be the collective conscience of the Mac faithful. Got me?

"Apple, I don't like those new kids you've been bringing around."

"Aw, Mom!"

"Don't 'Aw, Mom' me, mister. And you know who I'm talking about too — those Microsoft and CompUSA kids!"

"But Mom — they're really popular! Everybody likes 'em, everybody knows 'em. Besides, they're smart and they make lots of money! Don't you want me to be like them?"

"No I don't want you to be like them, Apple. Sure, they're smart, but they're nasty, and they're bullies, too! Always shaking people down for their lunch money, playing favorites like they do. Don't think I don't know about that."

"But Mom, Microsoft gave me a bunch of money and said I didn't have to pay it back, and he'll help me be more popular. Sometimes everybody just laughs and points at me and pushes me down the stairs and Microsoft's always doing something neat with the big kids and he has a customized van and —"

"So *what*? Can't you just be yourself? Money's not everything, dear. If Microsoft jumped off a bridge would you do that too? I mean, what about

that court thing, where he wouldn't separate his operating system from the browser, even though that made it unfair to the other browsers? And he made those nice PC makers — Compaq, Dell, even *HP* of all people — bundle that Windows mess with every one of their computers! And he was using all those temps as regular employees but without any benefits. That's not how it should be, Apple! Do you want to end up in court too?"

"I'm in court all the time, Mom."

"But not because you've done anything like Microsoft did! We all get into a little mischief now and then, honey, and that's OK ... just be yourself. People will notice that you have such a nice personality and make neat things."

"It's not like when *you* were in school, Mom! Microsoft's in every club and he's in with all the teachers and all the jocks and even the principal. You can't just ignore him! Plus I feel like the only ones who like me are the weirdos. The square pegs in the round holes."

"We've had this talk before, Apple. Those are the ones you should want to

like you. They're smart too, and they'll go far even if they don't make as much money as Microsoft. Really, honey, I'm just saying this because I care about you. You can hang around with Microsoft a little, when you need to. I know he's not going away. Just don't try to be like him, that's all."

"Don't you like any of my friends?"

"Sure! Lots of them! Like that nice Adobe boy. He pretends he's too 'cool' for you sometimes but he really likes you. I know he hangs out with Microsoft too, but he's just trying to fit

in. Same thing with the Macromedia sisters and Avid and InfoWave and Bungie and MacSoft and MetaCreations and Connectix; they're all nice. They all like you, and not because you

have money like Microsoft — but because you have personality, honey."

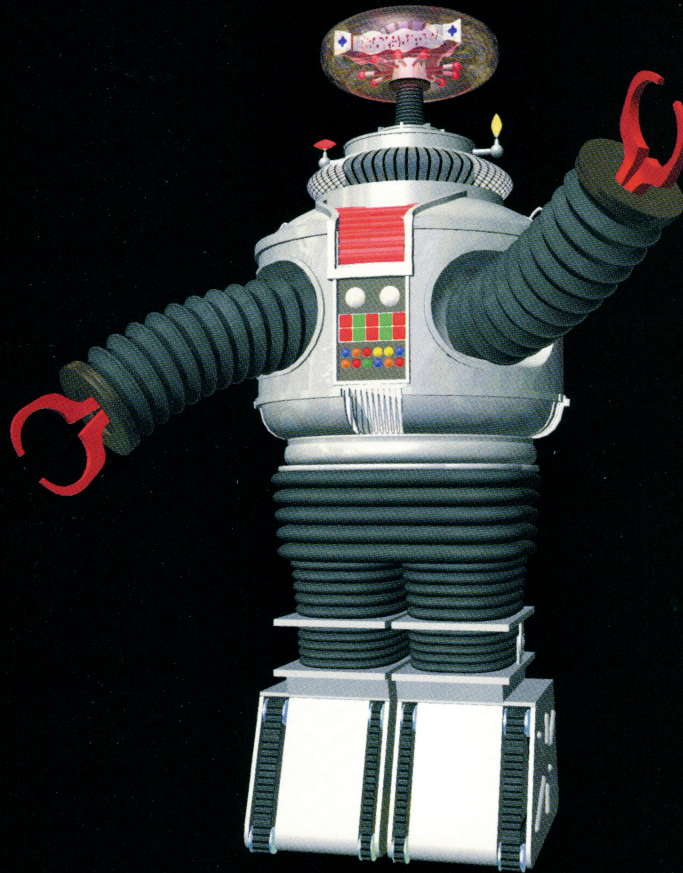
"Well, what about CompUSA?"

"You keep *away* from her! And Office Depot too! CompUSA's not even *trying* with that "store within a store" business. People at those places don't care about Macs; they're forever trying to sell you Windows thingies. And I heard Office Depot has some shady deal where he's supposed to recommend that people buy Brother and Xerox equipment instead of HP, so his managers can win prizes and trips if he sells enough equipment from those companies! And besides —"

"OK, Mom, OK. Sheesh."

Money's not everything, dear. If Microsoft jumped off a bridge would you do that too?

DANGER! DANGER!



Don't let your important data become Lost in Space™

When your Macintosh computer is not functioning properly, it is important that you have the right tool to find and correct the problem. And as any knowledgeable robot will tell you, one can never have too many tools when important data is at stake. TechTool Pro 2 checks and repairs more aspects of your Macintosh than any other utility available. Besides repairing and recovering damaged drives (including those with the new HFS+ format), you can also test all those other critical parts of your system that other utilities ignore like RAM, CPU, floppy drives, scanners, modems, Internet connections, CD-ROM drives and much, much more. TechTool Pro will even help your computer run faster by optimizing your disk drives.

But just because TechTool Pro is the most advanced Macintosh troubleshooting utility available doesn't mean that it's difficult to use. In fact, we've added an easy-to-use interface that makes checking and fixing your Macintosh a snap. For the advanced user, our expert mode allows you to control and configure TechTool Pro in almost any way you wish.

So if Macintosh troubles are making you feel like a bubble-headed booby, check out TechTool Pro. After all, you have the most powerful computer in the galaxy. Shouldn't you be using the most powerful utility?

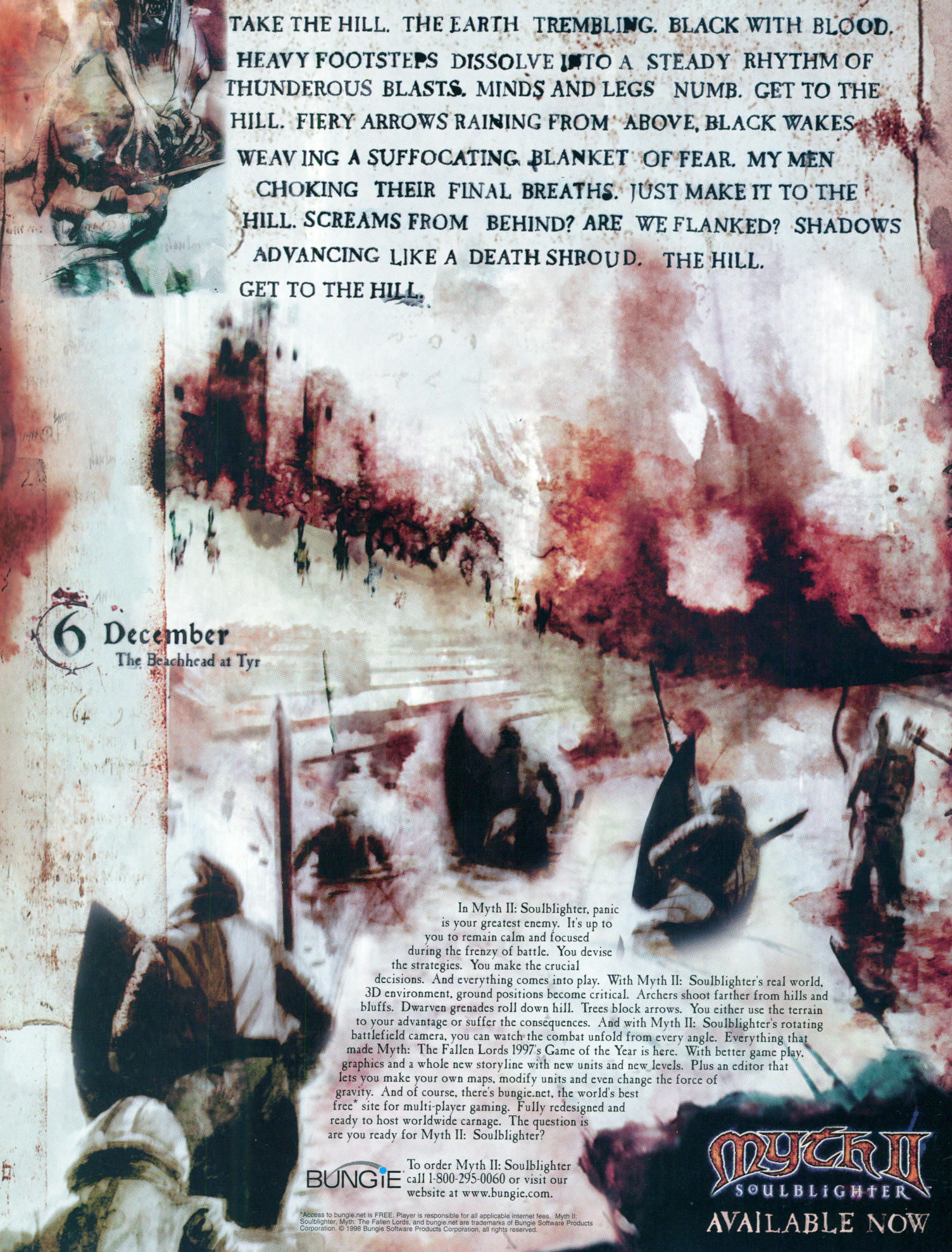
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HILL. FIERY ARROWS RAINING FROM ABOVE, BLACK WAKES
WEAVING A SUFFOCATING BLANKET OF FEAR. MY MEN
CHOKING THEIR FINAL BREATHS. JUST MAKE IT TO THE
HILL. SCREAMS FROM BEHIND? ARE WE FLANKED? SHADOWS
ADVANCING LIKE A DEATH SHROUD. THE HILL.
GET TO THE HILL.

6 December
The Beachhead at Tyr

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